PCB Cleanup and Disposal Work Plan
St. Johnsbury Armory Redevelopment Project
Building Remediation

1249 Main Street, St. Johnsbury, Vermont

Prepared for:	**Northeastern Vermont Development Association**
Prepared by:	**Town of St. Johnsbury**
EPA Cooperative Agreement Number:	**BF-00A01034**
Montrose Project Number:	**13854-01**

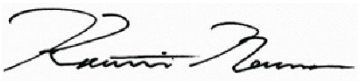
FEBRUARY 2024
REVISED MARCH 2024

PO Box 584
1140 Valley Forge Road
Valley Forge, Pennsylvania 19482
www.montrose-env.com

PAGE LEFT INTENTIONALLY BLANK

Environmental Professional Signatures

I certify under penalty of perjury that I am an environmental professional and that all content contained within this deliverable is to the best of my knowledge true and correct.

Prepared By: 

03/14/2024

Katie Nelson — Date

Reviewed By: 

03/14/2024

Kevin Ignaszak — Date

Montrose Environmental Solutions Project Manager: 

03/14/2024

Andrea Pedersen — Date

PAGE LEFT INTENTIONALLY BLANK

Table of Contents

Environmental Professional Signatures i
1 Introduction 1
1.1 Site Description / Land Use 1
1.2 Purpose and Scope 1
1.3 Notification/Application 2
1.4 Non-PCB Abatement and Remediation 2
1.5 Document Summary 2
2 Site Background and History 4
2.1 Site History 4
2.2 Geology and Hydrogeology 4
2.3 Prior PCB Surveys 4
2.3.1 Cardno ATC, Environmental Survey, March 28, 2013 4
2.3.2 ATC Group Services LLC, PCB Building Material Survey, March 3, 2017 4
2.3.3 KGSNE, LLC, Draft Targeted Brownfields Assessment Report, March 9, 2021 5
3 Targeted Brownfield Assessment Approach and Methodology - 2023 6
3.1 Building Materials 6
3.2 Soil 7
4 Targeted Brownfield Assessment Results - 2023 8
4.1 Building Materials 8
4.2 Soil 8
4.3 Data Validation 9
5 Nature and Extent of Contamination 10
6 Remedial Approach and Alternative Analysis 11
7 Remedial Action Program 13
7.1 General Information 13
7.1.1 Project Organization 13
7.1.2 Remedial Action Sequence 14
7.1.3 Work Hours 14
7.1.4 Site-Specific Health and Safety Plan (HASP) 14
7.1.5 Quality Assurance Protection Plan 14
7.1.6 Worker Training and Monitoring 15
7.1.7 Agency Approvals 15
7.2 Site Preparation 15
7.2.1 Kickoff Meeting 15
7.2.2 Construction Office Trailer and Sanitary Facilities 15
7.2.3 Erosion and Sedimentation Controls 15
7.2.4 Site Fencing 15
7.2.5 Stabilized Construction Entrance 16

7.2.6 Pedestrian and Traffic Safety 16
7.2.7 Utility Clearance 16
7.2.8 Sheeting and Shoring 16
7.2.9 Equipment and Material Staging 16
7.2.10 General Work Practices 16
7.3 Reporting 17
7.3.1 Daily Reports 17
7.3.2 Weekly Reports 17
7.3.3 Complaint Management Plan 17
7.4 Particulate Monitoring and Mitigation Plan 17
7.4.1 Objective 18
7.4.2 Scope of Dust Generating Activities 18
7.4.3 Particulate (Dust) Mitigation Procedures 18
7.4.3.1 Water Application 18
7.4.3.2 Vehicular (Administrative) Procedures 18
7.4.3.3 Negative Pressure 19
7.4.3.4 Real Time Particulate (PM_{10}) Monitoring Plan 19
7.4.3.5 Particulate PM10 Action Levels 19
7.4.3.6 Meteorological Monitoring 20
7.4.3.7 Particulate Monitoring Quality Assurance and Quality Control (QAQC) Procedures 20
7.4.3.8 Documentation and Reporting 20
7.5 Universal Waste 20
7.6 Waste Streams and Building Demolition 20
7.7 PCB Building Material Removal 25
7.7.1 Second Floor Building Material Verification Sampling 26
7.8 Risk-Based Cleanup and Disposal Plan (40 CFR 761.61(c)) 26
7.8.1 Location and Quantity of Impacted Building Materials 26
7.8.2 Paint Removal 26
7.8.3 Post-Paint Removal Sampling 27
7.8.4 Encapsulation 27
7.9 PCB Impacted Soil Excavation 28
7.9.1 Excavation Water 28
7.9.2 Verification Sampling 28
7.9.3 Waste Management 29
7.9.4 Backfill 29
7.10 Decontamination Procedures 29
7.10.1 Field Sampling Equipment 29
7.10.2 Heavy Earthmoving Equipment 30
7.10.3 Disposal of Decontamination Cleaning Liquids or Rinsates 30

7.11 PCB Waste Disposal 30
7.12 Contingency Plan 31
8 Long Term Monitoring and Maintenance 33
9 Project Schedule 34
10 Certification 35

Figures

Figure 1 Site Location
Figure 2 Site Plan
Figure 3A PCB Sample Locations – Second Floor (Level 2)
Figure 3B PCB Sample Locations – First Floor (Level 1)
Figure 3C PCB Sample Locations – Basement (Level 0)
Figure 3D PCB Sample Locations – Exterior
Figure 4A PCB Remediation Plan – Second Floor (Level 2)
Figure 4B PCB Remediation Plan – First Floor (Level 1)
Figure 4C PCB Remediation Plan – Basement (Level 0)
Figure 4D PCB Remediation Plan – North and East Elevations
Figure 4E PCB Remediation Plan – South and West Elevations
Figure 4F PCB Remediation Plan – Soil Remediation and Proposed Verification Sample Locations
Figure 5A Proposed Sample Locations – Second Floor (Level 2)
Figure 5B Proposed Sample Locations – First Floor (Level 1)
Figure 5C Proposed Sample Locations – Basement (Level 0)
Figure 6A PCB Encapsulation – First Floor (Level 1)
Figure 6B PCB Encapsulation – Basement (Level 0)

Tables

Table 1A.1 Historical PCB Material Characterization
Table 1A.2 Historical PCB Wipe Characterization
Table 1A.3 Historical Airborne PCB Characterization
Table 1A.4 Historical PCB Concrete Characterization
Table 1B Historical Asbestos Characterization
Table 1C.1 Historical LBP Characterization
Table 1C.2 Historical Lead Dust Characterization
Table 1D.1 Historical Soil Characterization - PAHs
Table 1D.2 Historical Soil Characterization - PCBs
Table 1D.3 Historical Soil Characterization - Metals

Table 2A PCB Paints and Coatings Sample Results
Table 2B PCB Bulk Material Sample Results
Table 2C PCB Soil Sample Results
Table 2D Lead Waste Characterization Sample Results
Table 2E Asbestos Sample Results
Table 2F PCB Waste Characterization Sample Results
Table 3 Sample Design - Post-Remediation PCB Building Material Samples
Table 4 Sample Design - PCB Excavation Verification Samples

Tables (in text)

Table A Document Summary
Table B Summary of PCB Paint/Coating Results
Table C Project Roles and Responsibilities
Table D Summary of Materials Containing Total PCBs > 50 ppm
Table E Summary of Materials Containing Total PCBs >1 ppm but < 50 ppm

Appendices

Appendix A Project Schedule
Appendix B Historical Sampling Reports
Appendix C Targeted Brownfields Assessment – Hazardous Building Materials Assessment
Appendix D Structural Letter from Structural Design Engineer
Appendix E Asbestos General Work Practices
Appendix F Proposed Encapsulant Information

PAGE LEFT INTENTIONALLY BLANK

1 INTRODUCTION

Montrose Environmental Solutions, Inc. (Montrose) has prepared this Poly-Chlorinated Biphenyl (PCB) Cleanup and Disposal Work Plan (Work Plan) in preparation for removal, management and/or disposal of PCB containing building materials and PCB impacted soil during the redevelopment of the Town of St. Johnsbury's Armory Building located at 1249 Main Street, St. Johnsbury, Vermont (Site). The proposed redevelopment will first include demolishing the majority of the rear (western) gymnasium portion of the building, gut renovation of the front (eastern) portion of the building and excavation of exterior PCB impacted soil. Following remedial activities, the Site and building will be developed into a new Town of St. Johnsbury Municipal Police and Regional Dispatch Center. This Work Plan was prepared in accordance with the U.S. Environmental Protection Agency's (EPA) Toxic Substances Control Act (TSCA) as per the United States Code of Federal Regulations 40 CFR § Part 761.61(a) "Self-implementing cleanup and disposal," and 761.61(c) "Risk-based cleanup and disposal." In 2023, Montrose and the Town have consulted and coordinated closely with the EPA regarding Site characterization, addressing data gaps and the proposed cleanup approach given the Site's proposed redevelopment and future use. Work is anticipated to commence following the effective date (February 26, 2024) for updates to TSCA's PCB Cleanup and Disposal regulations thus this Work Plan includes the updated regulations as applicable. This work will be funded by the Town of St. Johnsbury's EPA Brownfields Cleanup Grant (Cooperative Agreement No. BF-00A01034). Additional funding sources include a Brownfield Revitalization Fund Grant from the Vermont Agency of Commerce and Community Development (ACCD); a Community Development Block Grant (CDBG) from the Vermont Community Development Program (VCDP); and Revolving Loan Funds (RLF) from the Northwest Regional Planning Commission.

1.1 Site Description / Land Use

The Site consists of 0.44± acres (parcel no. 023-004-074-000) and is developed with a 2-story 16,700± square-foot (sq. ft.) masonry building constructed in 1916 as an armory. The Site has been owned by the Town of St. Johnsbury since 1975 and was used as a community recreational center until approximately 2009. The Site has been vacant since that time. The Site is bounded to the north by St. Andrews Episcopal Church; to the east by Main Street; to the south by an alley followed by a 2-story commercial building occupied by Richard Kozlowski General Dentistry; and to the west by Grace United Methodist Church.

Figure 1 depicts the general location of the Site and surrounding area on the USGS 7.5-Minute Series Topographic Series Quadrangle Map. **Figure 2** provides a Site Plan.

1.2 Purpose and Scope

The purpose of this Work Plan is to detail the means and methods of removing PCB containing building materials, removing PCB containing paint and encapsulating concrete, brick and masonry walls designated to remain, and removing PCB impacted soils. The proposed plan includes a hybrid approach of a self-implementing cleanup and disposal plan to address impacted building materials and soil, and risk-based cleanup and disposal approach to encapsulate structurally integral PCB impacted building materials that are not economically feasible to remove. This document is intended to serve as both the notification for self-implementing on-site cleanup and disposal per 40 CFR 761.61(a) and the application for risk-based disposal approval per 40 CFR 761.61(c). The Work Plan describes these approaches in **Sections 6** and **7**.

1.3 Notification/Application

This Work Plan is being provided 30 or more days in advance of cleanup activities, provides information required in 40 CFR § 761.61, and has been sent to the EPA Region 1 Administrator for approval. Per the schedule provided in **Appendix A**, construction is expected to commence on June 10, 2024. Copies of this notification/application will also be submitted to the Vermont Department of Environmental Conservation (VTDEC). A summary of the pre-characterization laboratory analytical data and proposed cleanup plan are included as part of this report. A written certification indicating that all information is available for EPA review, is attached to this report as **Section 10**.

1.4 Non-PCB Abatement and Remediation

Redevelopment of the Armory Building will require additional abatement and remediation which will be performed simultaneously with the PCB cleanup.

- Two areas of shallow impacted soils located within future greenspaces have been identified through prior investigation. One area is east of the building and is impacted with polycyclic aromatic hydrocarbons (PAHs). The second area to the south of the building and impacted with PAHs and lead. Remediation of impacted soils is subject to oversight by VTDEC.
- Abatement of asbestos will be performed in accordance with Vermont's Regulations for Asbestos Control, V.S.A. Title 18, Chapter 26 (VRAC).
- Removal of Lead-based paint (LBP) will be performed in accordance with lead safe work practices.

1.5 Document Summary

The work will be funded under the Town of St. Johnsbury EPA Brownfield Cleanup Grant and is subject to requirements of the Cooperative Agreement BF-00A01034. Additionally, as summarized in Section 1.4 various aspects of the work is subject to regulation by certain state agencies. To comply with federal and state regulations the following documents related to the redevelopment of the Site will be or have already been submitted for regulatory agency approval:

Table A – Document Summary

Plan Name	Scope	Date (actual/projected)	Approval Agency	Date Approved
Corrective Action Plan (CAP), Former St. Johnsbury Armory	Address PAH and Lead Impacted Soils	12/22/22	VTDEC	3/13/23
Addendum to the CAP	Addendum to 2022 CAP to include PCB impacted soils	February, 2024	VTDEC	TBD
Master Quality Assurance Protection Plan (QAPP) for Implementation of EPA Region 1 Brownfield Assessment and Revolving Loan Fund Grant Projects	QAPP QA Tracking No. QA#24013	November, 2023	EPA, Brownfields	December 2023
QAPP Addendum (QAPP-A)	Cleanup and Disposal of PCB Containing Building Materials, Asbestos, Lead-Based Paint, and PCB, PAH and Lead impacted soil	February, 2024	EPA, Brownfields	TBD

Plan Name	Scope	Date (actual/projected)	Approval Agency	Date Approved
Design and Specifications for Removal of Asbestos Containing Materials	Design in accordance with VRAC and included in Contract Documents	March, 2024	NA	TBD
Universal Waste Removal	Contract Documents	March, 2024	NA	TBD
Lead Paint Abatement and Substrates Removal	Contract Documents	March, 2024	NA	TBD
Building Remediation and Selective Demolition	Contract Documents	March, 2024	EPA/VTDEC	TBD

TBD- To be determined

2 SITE BACKGROUND AND HISTORY

2.1 Site History

Sanborn maps indicate that the Site contained residential dwellings between 1882 to 1912. The armory building was constructed on-Site in approximately 1916. Street Directory listings indicate continued use as an armory in some capacity from 1931 to 1974 after which the Town utilized the Site for their police and municipal departments until approximately 2009 when the building was vacated.

2.2 Geology and Hydrogeology

According to the Agency of Natural Resources (ANR) Natural Resources Atlas (NRA), native surficial soils at the Site include well sorted sand, with no pebbles or boulders. Soil boring observations generally indicate fill materials consisting of topsoil, sand, silt, and gravel of varying percentages. Native soils encountered generally consisted of well sorted fine to medium sands and were generally encountered at two feet below ground surface (ft bgs). Bedrock geology is expected to consist of phyllite from the Waits River formation. Groundwater was not previously encountered during drilling and is expected to be greater than 25 ft bgs.

2.3 Prior PCB Surveys

Numerous surveys of regulated building materials (RBMs) including asbestos, LBP and PCBs have previously been completed. Prior reports which included PCB sampling are summarized below. PCB concentrations and other historical data from these prior reports have been incorporated into **Tables 1A.1 - 1D.3** and **Figures 3A - 3D**. Prior reports are included in **Appendix B**.

2.3.1 Cardno ATC, Environmental Survey, March 28, 2013

This survey included initial inventory and sampling of building materials for asbestos and PCBs, lead paint testing, lead dust wipe sampling, mold testing (air and wipe samples), and investigation of the floor drain system. PCBs in building materials were encountered in the following materials at varying concentrations:

- Exterior Door Caulking – Gray
- Exterior Window Caulking – White
- Floor Paint – Gray
- Wall Paint – White
- Floor Paint – Blue

Concentrations ranged from 1.5 parts per million (ppm) in the white exterior window caulking to 5,700 ppm in the gray basement floor paint. Other building materials tested were non detect and therefore did not contain PCBs.

The report recommended further sampling of the basement concrete floor underlaying the PCB-containing paint to further delineate the extent of PCB impacts.

2.3.2 ATC Group Services LLC, PCB Building Material Survey, March 3, 2017

This survey included additional inventory and sampling for PCBs. Airborne PCB samples were collected from two indoor and one exterior area. Sample results for the armory building exhibited that the indoor airborne concentrations for all samples were below the EPA's 2016 Regional Screening Levels lowest risk value.

PCBs in building materials were encountered in the following materials at concentrations above 50 ppm:

- Grey Floor Paint – Basement (up to 20,000 ppm)
- Blue Floor Paint – Basement (up to 67 ppm)

Low level detections of PCBs were also encountered in exterior window glaze and caulk (<1 ppm) and White Wall Paint (9 ppm).

Wipe samples were collected of the interior floor surfaces throughout the building to determine if PCBs have impacted or settled on interior surfaces. All 11 wipe samples had detectable concentrations of PCBs with the highest in the areas of PCB containing paint.

Concrete was cored in 14 locations in the basement area where PCB containing paint had been identified. PCBs were identified to have impacted the concrete substrate up to 1.5 inches deep.

2.3.3 KGSNE, LLC, Draft Targeted Brownfields Assessment Report, March 9, 2021

This survey included additional inventory and sampling for asbestos and PCBs, LBP, regulated/universal waste survey, and mold. Five PCB samples were collected and included floor paper, tar, and paint. Gym floor paper, hardwood subfloor paper, light pink paint, and light blue paint had PCB concentrations greater than 1 ppm.

3 TARGETED BROWNFIELD ASSESSMENT APPROACH AND METHODOLOGY - 2023

The Town and their consultant held a meeting with EPA on March 13, 2023 to discuss the project and to seek guidance and acknowledgement on the appropriate path forward. Items discussed included an overview of the project, the previous PCB sampling results, the proposed redevelopment of the Site, the conceptual remedial measures, and data gaps. As a result of the meeting, EPA requested additional PCB characterization sampling and laboratory analyses be conducted to close data gaps and further refine the proposed remedial action. Due to the Town's budgetary constraints, the EPA proposed to conduct the additional sampling required.

Accordingly, a Targeted Brownfield Assessment (TBA) was performed by Nobis Group (Nobis) and their subcontractor KGSNE JV, LLC (KGSNE) in general accordance with the Workplan for Additional Hazardous Building Materials Sampling prepared by Atlas Technical Consultants (Atlas) dated March 20, 2023, the Quality Assurance Project Plan (QAPP) Addendum for St. Johnsbury Armory TBA dated July 10, 2023, and the QAPP Addendum Update dated October 31, 2023.

The purpose of the TBA was to complete additional sampling needed to address data gaps regarding the distribution of RBMs from prior surveys. To meet these objectives, additional suspect building materials and sub-slab soil was sampled for PCB analysis. The work was conducted in two phases:

- Phase 1: sampled suspected PCB and asbestos materials that were not adequately sampled previously and sub-slab basement soils.
- Phase 2: conducted following Phase 1 to further delineate findings from Phase 1 and perform lead-based paint waste stream characterization sampling.

Phase 1 of this work was conducted between August and October 2023 and Phase 2 was conducted in November and December 2023. A full report prepared by KGSNE summarizing the approach and methods is provided in **Appendix C.** A summary of the approach is described below.

3.1 Building Materials

Bulk building material samples were collected by Nobis's subcontractor KGSNE for laboratory analysis to evaluate the presence or absence of PCBs in suspect building materials. A summary of the samples collected is provided in **Tables 2A – 2B. Figures 3A** through **3D** provide the layout of each floor of the building (second floor, first floor, and basement) and sample collection locations.

For each sample a minimum of 2 grams of representative material were collected. Care was taken to ensure that no other materials were intermixed with the sample prior to submittal to the laboratory. For paint samples, a sample representative of the full thickness of wall paint (all layers) was collected. Paint samples were not collected where paint was peeling or chipping; instead, a smooth and intact location was selected for each sample. Prior to sampling, a water-wetted paper towel/rag was used to hand wipe the sampling area with the objective of removing dust or surface grime.

Sampling tools were decontaminated with a diluted hexane spray and deionized water between locations. Quality control samples collected during PCB bulk sampling included field duplicates and matrix spike/matrix spike duplicates. Samples were sent to Pace Analytical Laboratory for PCB analysis. Samples were transported under

chain-of-custody protocol for PCB analysis in accordance with the EPA 3540C Soxhlet extraction method and SW-846 8082 Aroclor analytical method.

On January 16, 2024 CPAI collected eight (8) samples for Toxic Characteristic Leaching Procedure (TCLP) PCB analysis. Samples were collected for waste characterization purposes in support of remedial design. The samples included collection of soil, painted wood, painted concrete, floor tile mastic and painted plaster/lathe.

3.2 Soil

Five sub-slab soil samples were collected for PCBs below the basement slab to test for potential impacts to the soil (see **Figure 3D**) on August 17, 2023. The floor was cored by Cascade Environmental (Cascade) with a 4-inch diameter core into the slab using wet coring methods. A wet-vac was utilized during coring to extract water/slurry from the edge of the core hole so that minimal water/slurry was discharged into the underlying soil. A representative grab sample of soil from the center bottom of each cored hole was collected using decontaminated hand tools.

During Phase 2, 24 soil borings were advanced around the exterior of the building to evaluate the potential for shallow soil impacts (see **Figure 3D**). The locations were predetermined based on high PCB results in Phase I materials samples. Drilex Environmental (Drilex) used a hand-held Geoprobe and hammer drill to advance each boring. Where present concrete was cored ahead of installing the soil boring. Dependent on recovery, soil samples were collected in 0.5-foot intervals to a depth of 5 feet below ground surface (ft bgs), and then in one-foot intervals from depths between 5 and 8 ft bgs. Samples were collected using a dedicated 24-inch acetate macro-core sampling sleeve.

Sampling tools were decontaminated with a diluted hexane spray and deionized water between locations. Soil samples were submitted to Pace Analytical Laboratory for PCB analysis. Quality control samples collected during PCB soil sampling included field duplicates and matrix spike/matrix spike duplicates. Samples were transported under chain-of-custody protocol and submitted for laboratory analysis of PCBs in accordance with the EPA 3540C Soxhlet extraction method and SW-846 8082 Aroclor analytical method. Only the top interval (0-0.5 feet bgs) samples from each location were initially submitted for analysis; all other samples were placed on hold at the laboratory and analyzed as needed given the results of the shallower samples.

4 TARGETED BROWNFIELD ASSESSMENT RESULTS - 2023

4.1 Building Materials

A total of 278 PCB paint/coating samples were collected. The following table presents a summary of the PCB paint/coating results:

Table B – Summary of PCB Paint/Coating Results

Location	Total PCB Paint/Coating Samples	Total Samples Exceeding 1 ppm of PCBs	Total Samples Exceeding 50 ppm of PCBs
Second Floor	48	48	8
First Floor	94	86	8
Basement	96	95	65
Exterior	40	28	11

From Adapted Targeted Brownfields Assessment Hazardous Building Material Assessment dated January 10, 2024 prepared by KGSNE.

Full PCB analytical results for paint/coating samples are included in **Table 2A.**

A total of 24 additional bulk samples were collected and submitted for PCB analysis. PCBs were detected above 50 ppm in three samples of black mastic collected under the floor tile in Room 18 in the basement. The remaining bulk samples collected had PCB concentrations above 1 ppm but below 50 ppm except for copper flashing around the chimney which had a concentration of PCBs below 1 ppm. Full PCB analytical results for bulk building material samples are included in **Table 2B.**

TCLP PCB analytical results identified no detections above the reporting limit and per 40 CFR 761.62(b)(1)(ii) are below the hazardous waste threshold of 10 ug/L.

4.2 Soil

Generally, the concrete of the basement floor was found to be between 2.5 to 5 inches thick. No PCBs were detected in the five sub-slab soil samples collected. Sub-slab soil results are presented on **Table 2C** and **Figure 3C.**

A total of 34 soil samples were analyzed from borings advanced on the exterior of the building for PCB analysis. The following locations reported PCB detections in the 0-0.5 foot interval and had deeper intervals analyzed;

- P-308-Ex (one additional interval analyzed)
- P-313-Ex had two additional intervals analyzed
- P-314-Ex had one additional interval analyzed
- P-315-Ex had two additional intervals analyzed
- P-316-Ex had one additional interval analyzed
- P-321-Ex had one additional interval analyzed
- P-323-Ex had one additional interval analyzed
- P-326-Ex had one additional interval analyzed

The highest concentrations of PCBs were detected in samples collected from boring P-315-Ex. at a concentration of 4.4 ppm in the 0-0.5 foot sample. Total PCBs were reported at a concentration of 1.3 ppm in the 0.5-1.0 foot sample, and at a concentration of 0.097 ppm in the 1-1.5 foot sample. Exterior soil results are presented on **Table 2C** and depicted on **Figure 3D**.

4.3 Data Validation

As described in KGSNE's report included in **Appendix C**, a Tier 1 Stage 2A manual data review (S2AVM) on the analytical data collected during the TBA was conducted. The Tier 1 Stage 2A manual data review was performed in accordance with the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures; EPA's National Functional Guidelines for Organic Superfund Methods Data Review; EPA's National Functional Guidelines for Inorganic Superfund Methods Data Review; the Program QAPP (RFA# 12263), dated October 2022, and the QAPPA for the St. Johnsbury Armory Site, which appends the October 2022 Program QAPP. In general, the data meets the project quality criteria and can be used without restriction. Qualified results are noted in the data summary tables. Limitations and qualification of the data are provided in KGSNE's report provided in **Appendix C**.

5 NATURE AND EXTENT OF CONTAMINATION

Prior surveys have identified PCBs in building materials and soils greater than the cleanup level of 1 ppm. With the highest PCB concentrations detected being 20,000 ppm. The majority of PCBs detected in paint consist of Aroclor 1254 with occasional concentrations of Aroclor 1242. PCB analytical results and extent of PCB impacts are depicted on **Figures 3A** through **3F**.

The highest concentrations of total PCBs have generally been identified in paints especially paint in the basement level, in an exterior stairwell and the southwest loading ramp. In many instances PCB containing paint has impacted underlying substrates including wood, concrete and brick. This includes the wood floors on the first and second floor of the building. It is unknown if wooden floor joists beneath the wood plank flooring has been impacted. Concrete windowsills underlying the PCB containing window caulk and paint was found to not contain PCBs greater than 1 ppm. In addition to the paint and impacted substrates, floor tile mastic was also identified to contain PCBs greater than 50 ppm.

Sub-slab soil samples collected during the TBA has demonstrated that PCBs have not leached to soil below the building slab or exterior stairwell. Exterior soils in the southwest loading dock were found to contain PCBs above the cleanup level of 1 ppm to a depth of 1.5 ft bgs due to deteriorating PCB impacted paint from the adjacent southwest loading dock building.

6 REMEDIAL APPROACH AND ALTERNATIVE ANALYSIS

The proposed remedial action described in **Section 7** and depicted on **Figures 4A** through **4F** (removal/abatement) and **Figure 6** (encapsulation) proposes to address PCB impacted building materials and soil through a hybrid approach:

1. Self-implement cleanup plan per 40 CFR 761.61(a) for PCB impacted building materials and soils greater than 1 ppm total PCBs.
2. Risk-based cleanup and disposal per 40 CFR 761.61(c) for encapsulation of brick, concrete and mortar impacted by overlying PCB containing paint located on walls as shown on **Figure 6**.

The remedial goals presented herein are designed to be consistent with TSCA and VTDEC requirements. The following cleanup standards have been determined to be protective of human health and the environment:

- PCB Cleanup Level proposed for this Site is ≤1 ppm in accordance with 40 CFR 761.61(a)(4) for a high occupancy area.
- For building materials that cannot be removed due to integral structural locations resulting in economic unfeasibility for removal and replacement, an encapsulant will be utilized to prevent future building occupants to be in contact with PCB containing building materials and to prevent off-gassing of residual PCBs. Because the cleanup criteria under the risk-based disposal provisions 40 CFR 761.61(c) are based on the potential for exposure to PCBs following the completion of remediation, published numerical standards need not be applied, provided the remedy is protective.

The above remedial goals are considered protective of human health and the environment, based on the following factors:

- The concentration of PCBs in exposed surface soils will be removed to the ≤1 ppm cleanup level which is protective of human health for potential receptors that contact surface soil, such as site workers, visitors, trespassers.
- The concentration of PCBs in exposed building materials will be removed to the ≤1 ppm cleanup level which is protective of human health for building occupants.
- Engineering controls will be used to control risk of exposure to residual PCBs in basement and eastern gymnasium walls following impacted paint removal. Engineering controls will include use of a two-layer encapsulant coating. Encapsulated PCB impacted walls will be subject to long term monitoring of the condition of the encapsulant and annual PCB air monitoring. The encapsulant will be applied in two layers in two different colors which will allow for damage to the upper layer to be visually observed and repaired prior to full degradation of both layers. The encapsulant will be inspected and its condition documented on an annual basis.
- The encapsulant system will reduce the potential for airborne PCBs since it will create a barrier between the residual PCBs and open air. Annual indoor air sampling and reporting will be conducted following remediation to confirm on-going effectiveness of the encapsulant.
- A deed restriction will be applied with language that all current and future owners must maintain the encapsulant and perform annual air monitoring and reporting.

Based on the above factors the PCB Remedial Plan presented herein is believed to be adequately protective of human health and the environment, as required by 40 CFR 761.61(c). Wetlands, water bodies, sediments or

other similar matrices have not been affected by PCBs on-Site and as such an Ecological Risk Assessment is not applicable.

There are no other feasible alternatives to the risk-based approach for the brick, concrete and mortar walls designated to remain because they are structurally integral to the building and their removal and replacement is not economically feasible. This is documented in the Structural Engineer's assessment letter provided in **Appendix D**. Given the infeasibility to remove these impacted building materials another option was not considered as part of the remedial approach.

Section 7 of this Work Plan consists of the following parts:

- Section 7.1 – General Remedial Construction Information;
- Section 7.2 – Site Preparation;
- Section 7.3 –Reporting;
- Section 7.4 – Particulate Monitoring and Mitigation Plan;
- Section 7.5 – Universal Waste Removal;
- Section 7.6 – Waste Streams and Building Demolition;
- Section 7.7 – PCB Building Material Removal;
- Section 7.8 – Risk-Based Cleanup and Disposal Plan (40 CFR; 761.61(c))
- Section 7.9 – PCB Impacted Soil Excavation;
- Section 7.10 – Decontamination Procedures;
- Section 7.11 – PCB Waste Disposal; and
- Section 7.12 – Contingency Plan.

Post-remediation long term monitoring and maintenance is discussed in **Section 8**.

7 REMEDIAL ACTION PROGRAM

7.1 General Information

7.1.1 Project Organization

The table below summaries the roles and responsibilities involved in the project.

Table C - Project Roles and Responsibilities

Organization	Name	Title	Contact Information	Summary of Responsibilities
Town of St. Johnsbury	Joe Kasprzak	Assistant Town Manager	802-748-3926 X 5 jkasprzak@stjvt.com	Owner
EPA Region 1 Regional PCB Coordination	Kate Woodward	PCB Coordinator	(617) 918-1353 woodward.katherine@epa.gov	Review and Approval of PCB Work Plan and Cleanup Report
EPA Region 1 Brownfields & Sustainable Materials Management Branch	Christine Beling	Project Officer	(617) 918-1792 beling.christine@epa.gov	Oversees Brownfield Grant Administration and Approvals
Vermont Department of Environmental Conservation (VTDEC)	Kassandra Kimmey	Environmental Analyst VI	802-505-8060 kassandra.kimmey@vermont.gov	Vermont Regulatory Oversight
Remediation Contractor (Remedial Contractor)	TBD	TBD	TBD	Contractor responsible for providing all labor, equipment and materials associated with abatement, remediation and demolition activities. Responsible for providing workers with appropriate federal and state abatement licenses.
Montrose Environmental Solutions (Montrose)	Kevin Ignaszak	Senior Principal Engineer	(716) 329-0672 kignaszak@montrose-env.com	Town of St. Johnsbury Environmental Consultant - Lead Remediation Engineer and Construction Oversight
Montrose Environmental Solutions (Montrose)	TBD	Field Support	TBD	Oversee PCB remediation activities, perform particulate monitoring, collect post-remediation samples
Clay Point Associates Inc (CPAI)	Todd Hobson	Environmental Associate	802.343.4809 hobson@claypointassociates.com	Asbestos and Lead Based Paint Abatement Design and Oversight

7.1.2 Remedial Action Sequence

The proposed project schedule is discussed **Section 9**. The estimated construction timeframe to complete the remedial action is approximately 14 weeks, contingent upon the selected Remedial Contractor's submitted schedule, and is anticipated to be completed in the following stages:

Stage 1: Preparing and submitting a Generator's Waste Profile to the disposal facility and obtaining landfill approval. Additional waste characterization samples may need to be collected to satisfy disposal facility requirements. This could occur at the time of the pre-construction meeting, if required.

Stage 2: Mobilize to Site and complete Site Preparation activities.

Stage 3: Perform building material remediation, install building bracing structures and perform demolition work. Building demolition will be broken into two phases, contingent upon the selected Remedial Contractor's proposed sequence to complete the work. Phase A will consist of abatement and demolition of the western portion of the building including the gymnasium. Phase B will include abatement of the eastern portion of the building that will remain.

Stage 4: Following completion of the abatement in Phase B, collect PCB verification samples and apply encapsulant to designated PCB impacted basement foundation and eastern gymnasium walls that are to remain.

Stage 5: Excavation of PCB impacted soil adjacent to southwest loading dock. Collect post excavation verification soil samples with expedited turnaround of two-three business days following receipt by lab. Following receipt of sample results import clean fill and backfill the excavation.

Stage 6: Complete waste loadout and miscellaneous activities.

Stage 7*:* Demobilization from the site.

Heavy equipment decontamination and collection of verification wipe samples for confirmation of residual PCBs with expedited turnaround of two-three business days following receipt by lab, will be completed as needed and prior to removal of equipment from the Site.

7.1.3 Work Hours

Construction activities are expected to occur between 7:00 am to 5:00 pm, Monday through Friday, excluding holidays. Work hours will not occur during the Town of St. Johnsbury's prohibited times for construction noise (9 PM to 6 AM) per the Code of Civil Ordinances Amendment Chapter 8 Objectionable Noise (11/26/2012).

7.1.4 Site-Specific Health and Safety Plan (HASP)

Before the commencement of field activities, the Remedial Contractor, Montrose and CPAI will prepare site-specific HASPs in accordance with Title 29 of the U.S. Code of Federal Regulations, part 1910.12, for their respective personnel. All workers will be subject to Site-specific safety training. Attendance at a daily safety briefing will be mandatory for all workers (Remedial Contractor, Montrose and CPAI).

7.1.5 Quality Assurance Protection Plan

Quality Assurance/Quality Control (QA/QC) procedures will be followed in accordance with Montrose's QAPP (QA#24013) approved December 8, 2023 and Site Specific QAPP Addendum (SSQAPPA) being prepared simultaneously with this Work Plan under a separate cover.

7.1.6 Worker Training and Monitoring

Site workers involved with the handling of contaminated materials will have up-to-date OSHA HAZWOPER certification, medical monitoring and a respirator fit-test. Workers will have the appropriate state and federal training and licences for conducting RBM abatement and remediation.

7.1.7 Agency Approvals

The Work Plan will be performed following approval by the Regional EPA Coordinator. Montrose's staff will oversee the implementation of this Work Plan and CAP. CPAI will oversee asbestos and LBP abatement which is expected to occur simultaneously with this Work Plan. Other local permits or government approvals required for the remedial construction activities will be obtained prior to the start of remedial construction by the Remedial Contractor.

7.2 Site Preparation

7.2.1 Kickoff Meeting

One week prior to the start of abatement work, a kickoff meeting will be held at the Site with the Town of St. Johnsbury, Montrose, CPAI and the Remedial Contractor. The objective of this kickoff meeting will be to provide a general overview of the work, review of roles and responsibilities, material management requirements (including necessary approvals) during ground intrusive and abatement work, provide an overview of the particulate air monitoring activities, triggers and corrective actions, provide an overview of truck and equipment decontamination procedures, wipe sample confirmation samples, and an overview of post removal confirmatory sample procedures and timeframes. Montrose and CPAI will prepare an agenda and organize the meeting. If needed, depending on the Remedial Contractor's selected disposal facilities, additional waste characterization samples may be collected following the meeting.

7.2.2 Construction Office Trailer and Sanitary Facilities

The Remedial Contractor will mobilize a construction office trailer complete with heat, electric, drinking water as well as temporary sanitation facilities. Montrose and CPAI will need to use a portion of the construction office trailer for staging and charging equipment, preparing and shipping bottleware, etc.

7.2.3 Erosion and Sedimentation Controls

Best Management Practices will be employed by the Remedial Contractor for erosion and sediment controls (ESCs) including silt fence, bermed and lined material stockpiles, stabilized construction entrances, vehicle decontamination and dust control measures, as needed. Existing concrete and asphalt surfaces will be kept free of loose soil/dust to minimize the amount of potentially mobile sediment discharge into the sewers.

7.2.4 Site Fencing

The General Contractor will construct a temporary 6 ft tall construction fence around the Site. The fence will contain three locking gates. The Remedial Contractor shall maintain the integrity of the perimeter fence, gates and shall lock the gates during non-working hours. In addition to the Site perimeter fence, the Remedial Contractor shall erect and maintain orange construction fencing surrounding open subsurface excavations until excavations have been backfilled to surrounding grade.

7.2.5 Stabilized Construction Entrance

The Remedial Contractor will be responsible for ensuring that egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during remediation. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site sediment tracking. Cleaning of the adjacent streets will be performed as needed by the Remedial Contractor to maintain a clean condition with respect to Site-derived materials.

7.2.6 Pedestrian and Traffic Safety

Vehicular and pedestrian traffic is present in the vicinity of the Site. The existing sidewalk to the east of the armory building will be kept open and maintained for pedestrian traffic. The Remedial Contractor will provide a worker(s) at the Site entrance with flaggers, when deemed necessary, to ensure safe entry and exit of vehicles.

7.2.7 Utility Clearance

The Remedial Contractor will be responsible for the identification of utilities that might be affected by work under the Work Plan and for implementation of all required, appropriate, or necessary health and safety measures during performance of work. The Remedial Contractor will be responsible for safe execution of all invasive and other work performed under this Work Plan. The Remedial Contractor will obtain the local, State, or Federal permits or approvals pertinent to such work that may be required to perform work under this Work Plan.

7.2.8 Building Bracing and Excavation Shoring

The structural stability of excavations and on-Site and off-Site structures will be appropriately managed by the Remedial Contractor during on-site activities, including excavation and backfilling. The Remedial Contractor will be required to retain a licensed structural engineer to design the necessary excavation shoring and the building bracing system to maintain the western wall of the building and the eastern portion of the gymnasium walls designated to remain. The Remedial Contractor will install the bracing system before demolition takes place and it shall be maintained until removed by the General Contractor during building re-construction.

7.2.9 Equipment and Material Staging

An Equipment and Material Staging Area will be designated in a portion of the Site away from areas that will require remediation, as feasible. As demolitions and excavations are planned throughout the Site, multiple equipment and material staging areas may be required for different phases of work. Decontamination Areas will be designated in portions of the Site near the areas that will require remediation.

7.2.10 General Work Practices

PCB building material remediation, ACM abatement and LBP removal will occur simultaneously. The Remedial Contractor will follow the general work practices prescribed in the Asbestos Design Contract Documents. An example of general work practices that apply to PCB building remediation is included in **Appendix E**. These work practices will be revised to be site specific in the final Contract Documents. General asbestos abatement work practices that will be employed during PCB building material removal work include:

- Pre-cleaning;

- Worker Decontamination Structure;
- Waste Load-Out Structure;
- Critical Barriers;
- Critical Barrier Inspection;
- Containment Barriers;
- Negative Pressure Differential/Filtration;
- Inspection of Setup Procedures;
- Initial Cleaning;
- Initial Visual Inspection;
- Takedown of Containment Barriers;
- Cleaning of the Abatement Work Area;
- Visual Inspection;
- Removal of Critical Barriers; and
- Final Inspection.

7.3 Reporting

7.3.1 Daily Reports

At the end of each workday, the Remedial Contractor's Site Superintendent, CPAI and Montrose's Field Team Leader will meet to discuss and agree upon the work completed for the day, including labor, equipment, and materials delivered, utilized, or removed from the Site and other pertinent field items in writing. On a daily basis, Montrose will also take pertinent photographs to document the work, track all waste manifests, pertinent quantities, and particulate air monitoring data. The anticipated work to be completed for the following two-to-three days will also be discussed and understood to keep the parties aligned and minimize future issues from arising.

7.3.2 Weekly Reports

By the close of business each Monday, Montrose will provide a Weekly Report summarizing the prior week's activities to the Town of St. Johnsbury. The Weekly Report will provide a high-level summary based on the Daily Reports compiled from the prior week's completed activities.

7.3.3 Complaint Management Plan

In the event they should arise, public complaints regarding the construction activities will be immediately discussed between the Remedial Contractor, Montrose, CPAI and the Town of St. Johnsbury. The Remedial Contractor will be responsible to resolve the issue expeditiously once a solution is developed. In the event of a health-related public complaint, the Town of St. Johnsbury and Montrose must be notified as soon as possible, or within 24 hours of the occurrence.

7.4 Particulate Monitoring and Mitigation Plan

The handling of PCB impacted materials has the potential to emit impacted particulates (dust) into the surrounding air. Therefore, exterior particulate (dust) mitigation procedures along with real-time particulate

(dust) monitoring by Montrose will be required throughout the remediation process when impacted material is being actively handled or managed by heavy construction equipment.

7.4.1 Objective

To prevent community exposure to PCB impacted particulates (dust) during impacted material removal and handling, Particulate (Dust) Mitigation Procedures (PDMPs) in conjunction with a real-time particulate (dust) monitoring plan will be implemented. The following subsections describe the means and methods by which this Particulate (Dust) Mitigation & Real-Time Monitoring Plan will be implemented.

7.4.2 Scope of Dust Generating Activities

The general scope of dust generating site remediation work consists of the following:

- Removal of PCB containing building materials;
- Demolition activities;
- Loading of PCB impacted building material for off-site transport; and
- Excavation and loading of PCB impacted soil for off-site transport.

7.4.3 Particulate (Dust) Mitigation Procedures

Real-time monitoring of particulates that are 10 micrometers or smaller (PM_{10}) will be performed during the management of impacted material. Based on the results of real-time PM_{10} monitoring described below, active PDMPs mitigation controls may need to be implemented to mitigate the potential for fugitive dust emissions from the Site.

7.4.3.1 Water Application

Water application may be used to suppress the generation of fugitive dust during demolition, excavation and impacted material handling. When water is used as a PDMP, it will be applied utilizing a water truck in a manner to suppress dust on temporary haul routes, stockpiles, and any other areas as required. In addition, direct spray may also be applied through the use of a hose for more targeted dust mitigation at the Site including during building demolition activities. Water runoff from the Site will not be allowed during dust suppression water application activities.

7.4.3.2 Vehicular (Administrative) Procedures

The following vehicular practices shall be followed to minimize dust generation:

- All vehicles are required to maintain slow speeds while on-site (less than 5 miles per hour) for general safety as well as dust control measures;
- Vehicle traffic in non-designated travel areas shall be minimized;
- Trucks will minimize traversing in areas containing impacted soil; and
- All haul trucks shall be covered with tarps prior to transporting impacted material off-site in accordance with US Department of Transportation (DOT) regulations as well as all State and local regulations.

7.4.3.3 Negative Pressure

As required for asbestos abatement, interior areas will be under negative pressure during interior abatement work. Negative pressure will help reduce the potential for impacted particulates to leave the work zone. Negative pressure containments will be monitored as per the Asbestos Design Contract Documents.

7.4.3.4 Real Time Particulate (PM_{10}) Monitoring Plan

Real-time PM_{10} monitoring of the ambient air will be conducted during remediation activities to monitor potential impacts to the downwind community. As a component of this approach, air monitoring will be conducted at designated upwind, and downwind locations that will vary depending on daily prevailing wind patterns, and adjusted as necessary. For interior work the "downwind" location will be located immediately outside the entrance to the containment and the "upwind" location will be a background station located elsewhere in the building or outside where abatement work is not taking place. For exterior work the downwind location shall be located along the perimeter of the work area so that the monitor location is directly downwind of the center of potential dust generating activities. In addition, fugitive dust migration will be visually assessed by Montrose during work activities.

The PM_{10} monitoring program will consist of real-time monitoring for particulate matter that are less than ten micrometers in size using a TSI DustTrak™ DRX 8533 or equivalent device that can provide instantaneous (real-time) data, can autocorrect for relative air humidity, and is able to operate at a sample integration time of 15 minutes or less.

7.4.3.5 Particulate PM10 Action Levels

The notification and action levels for particulate matter in ambient air for 10-hour average concentrations of PM_{10} (particulate matter with a diameter less than 10 micrometers) are 120 µg/m^3 and 150 µg/m^3, respectively. The action level is equivalent to the current 24-hour National Ambient Air Quality Standard (NAAQS) for PM_{10} (150 µg/m^3). The notification level represents 80 percent of the action level and has been selected to allow notice before concentrations reach the level of the 24-hour NAAQS.

For each day of monitoring, the particulate data from the down-wind on-Site monitor will be compared with the date from the upwind (background monitoring). In the event that a 10-hour average PM_{10} concentration at a monitoring location exceeds the action level, Montrose will immediately notify the Remedial Contractor, and the Remedial Contractor will:

- Temporarily cease remediation activities;
- Hold a discussion with Montrose regarding the appropriate immediate or short-term response actions to address the action level exceedance and their implementation; and
- Confirm with Montrose that the response action was effective.

Montrose will provide written notice of an action level exceedance to the Town of St. Johnsbury, the EPA Brownfields Project Officer and VTDEC within 72 hours after receiving notification of the exceedance. The notice will include the duration of the exceedance and a description of the corrective actions taken.

The dust monitors will be equipped with an audible alarm when instantaneous readings are in excess of the 10-hour average PM_{10} notification level. Upon audible alarm notification, remediation activities will temporally cease to implement PDMPs described above. After implementing PDMPs and upon resuming Site remediation activities, Montrose will closely monitor instantaneous readings to determine if the PDMPs were effective in reducing instantaneous readings below the 10-hour average PM_{10} notification limit and implement the frequency of PDMP application or additional PDMPs if necessary. If the PDMPs described herein are found to be not effective in reducing instantaneous particulate levels below the 10-hour average PM_{10} notification limit, remediation activities will cease and corrective actions will be implemented that may include but are not limited to not working in high wind conditions, increasing the frequency of PDMP applications, or implementing alternative PDMPs not explicitly described in this plan.

7.4.3.6 Meteorological Monitoring

Hourly meteorological data from the Automated Surface Observation System (ASOS) Monitoring operated at the Caledonia County Airport (ID: KCDA) will be included with the sampling results. The National Weather Service, Federal Aviation Administration, and the Department of Defense operate the ASOS Monitoring Station. The ASOS Monitoring measures and records wind speed, wind direction, precipitation, temperate, sky conditions, barometric pressure, and relative humidity.

7.4.3.7 Particulate Monitoring Quality Assurance and Quality Control (QAQC) Procedures

Equipment audible alarm checks will be conducted at the start of each workday. Montrose will operate within hearing distance of the alarm in order to properly notify the Remedial Contractor that instantaneous particulate levels are exceeding the 10-hour PM_{10} notification limit so that PMDPs can be promptly implemented.

Calibration and maintenance of PM_{10} monitoring stations and any other applicable QAQC procedures will be conducted by Montrose by the method and frequency recommended by the equipment manufacturer.

7.4.3.8 Documentation and Reporting

Air monitoring records will be maintained electronically. Particulate data will be summarized daily and a weekly summary will be included in the Weekly Report described in **Section 7.3.2**. The final report will summarize the results of particulate monitoring and will include:

- Dates and times of monitoring;
- Description of sample locations by date;
- Calibration and maintenance records;
- Narrative summary of real time data by data, particulate mitigation methods used, meteorological. data and discussion of any notification or action 10-hour PM10 exceedance; and
- Electronic copy of meteorological and real time particulate data for each monitoring station.

7.5 Universal Waste

Universal wastes encountered during prior surveys have included compact fluorescent bulbs, fluorescent light tubes/ballasts, exit sign/lights, batteries, thermostats, fire extinguishers, and various containers with residual cleaning solutions/paints/adhesives. Prior to the start of demolition activities Universal Waste will be removed and disposed of in accordance with state and federal regulations.

7.6 Waste Streams and Building Demolition

The following materials and quantities have been identified as containing PCBs >50 ppm:

Table D – Summary of Materials Containing Total PCBs > 50 ppm

Description	Quantity (tons)	Notes:
PCB TSCA Haz-Waste: Dried paint - failing TCLP for lead (classified as D008 hazardous waste) and with PCBs > 50 ppm. Includes PCB Paint Chips/Dust/Debris/ACM on floors, plus disposal of all ductwork, electrical, plumbing, etc. with PCB and Asbestos dust.	40	
PCB TSCA Haz-Waste: Building demo debris with asbestos. Plaster, joint compound, insulation, cloth, door(s), caulk. (friable and non-friable) Includes paint with PCBs >50 ppm and haz lead paint	21	Includes ACM and/or Haz PCB and/or Haz Lead in **Basement:** 11 tons of plaster/drywall; **1st floor:** 10 tons of plaster/lathe; **Gym and 2nd Floor:** 0 tons = **21 tons**
PCB TSCA Haz-Waste: Concrete Rubble with PCB paint levels > 50 adhered to substrate (Conversations with EPA Region 1 PCB Coordinator suggest this would be considered bulk product waste). Brick, concrete rubble, cinder blocks.	294	Includes **Basement:** 272 tons of exterior/Interior Concrete/Masonry Walls and concrete slab + 3 tons of protective plywood on floor + 0.5 tons of Stairwell 0-1 wood; **1st Floor**: 0.5 tons of Stairell 1-2 wood; **Gym:** 0 tons; **2nd floor:** 2 tons red trim + two doors + wood flooring; **Exterior:** 16 tons north central stairwell + southwest loading ramp = **294 tons**

The following materials and quantities have been identified as containing PCBs >1 ppm but <50 ppm:

Table E – Summary of Materials Containing Total PCBs >1 ppm but < 50 ppm

Description	Quantity (tons)	Notes:
PCB Non-Haz Remediation Waste: Building demo debris with asbestos. Plaster, joint compound, insulation, cloth, door(s), caulk. (friable and non-friable) Includes paint with PCBs >1 but < 50 ppm and non-haz lead paint	246	Includes ACM debris in **Basement:** 53 tons of plaster/drywall + 5.5 tons wood framing +1 ton pipe insulations + 2.5 ton boiler; **1st Floor + E. Wall of Gym:** 86 tons of plaster/drywall/studs; **2nd Floor:** 85 tons of plaster/drywall/studs; **Exterior:** 13 tons of roof flashing, coating and caulking materials = **246 tons**
PCB Non-Haz Remediation Waste: Building demo debris with non-haz lead paint and with PCBs > 1 but < 50 ppm. Wood, painted metal, plaster, lath, concrete rubble, brick, cinder blocks, window frames w/glass, etc.	582	Includes **Basement:** 264 tons of exterior/Interior Concrete/Masonry Walls and concrete slab; **1st Floor**: 2 tons of wood flooring; **Gym:** 39 tons of floor and ceiling + 20 tons trusses + 246 tons exterior masonry walls; **2nd floor:** 0 tons; **Exterior:** 10 tons north central/west stair and canopies; 1 ton front doors and railings = **582 tons**
PCB Non-Haz Remediation Waste: Soils containing PCBs under 10 ppm	10	

PCB impacted building materials proposed to be removed from the Site will be separated into the following three waste streams.

- Hazardous PCB Remediation Waste - Includes loose paint not adhered to substrate with concentrations >50 ppm.
- Non-Hazardous PCB Remediation Waste - Includes soil and painted substrates (such as wood and concrete) with concentrations >1 ppm but <50 ppm.
- PCB Bulk Product Waste - Includes painted substrates with concentrations > 50 ppm such as painted wood and concrete surfaces.

Demolition will be implemented in a controlled manner to minimize cross-contamination of waste streams.

Detailed building demolition plans are presented in **Figures 4A** through **4E**. The anticipated demolition sequence for PCB impacted building materials is expected to be as follows, but may be modified based upon input by the selected Remedial Contractor. It is anticipated that the building will be abated/demolished in two sections. First section will be the gymnasium/ western portion of the building which will be demolished (Phase A) and the second section will the eastern portion of the building which will be renovated (Phase B). The below sequence does not account for ACM and LBP removal which will occur simultaneously.

1. **Phase A- Gymnasium/Western Portion of Building:** Conduct pre-cleaning activities, set-up containment and set-up waste load out structure(s).
    a. Scrape all loose and peeling paint from all surfaces and clean using wet cleaning methods and/or HEPA vacuuming techniques. Dispose of these materials as Hazardous PCB Remediation Wastes.

b. Begin to selectively remove materials designated as PCBs ≥50.0 ppm in the gymnasium (Level 1) per **Figure 4B**, western portion of the basement area as shown on **Figure 4C,** and exterior areas of the western building per **Figures 4D and 4E**, excluding the floor of the basement. Dispose of these materials as PCB Bulk Product Waste.
c. Selectively remove materials designated as PCBs ≥1.0 ppm and <50.0 ppm in the western portion of building as shown on **Figures 4B, 4C, 4D** and **4E,** excluding the floor of the basement. Dispose of these materials as Non-Hazardous PCB Remediation Waste.
d. Protect the basement flooring during demolition of the western portion of the building by placing two (2) 6-mil layers of polyethylene sheeting followed by 0.75-inch thick plywood.
e. Install structural bracing and shoring, segregate (dismantle/cut) the gymnasium walls from those designated to remain, the gymnasium is imploded into basement followed by debris loaded out.
f. Remove protective plywood and polyethylene sheeting, basement concrete slabs, dispose as either PCB Bulk Product Waste or Non-Hazardous PCB Remediation Waste (as designated),and backfill the area.

2. Part B – Eastern Portion of Building

a. **Second Floor:** Conduct pre-cleaning activities, set-up containment and set-up waste load out structure(s).
    i. Scrape all loose and peeling paint from all surfaces and clean using wet cleaning methods and/or HEPA vacuuming techniques. Dispose of these materials as Hazardous PCB Remediation Wastes.
    ii. Begin to selectively remove materials designated as PCBs ≥50.0 ppm on **Figure 4A**, excluding the floor. Dispose of these materials as PCB Bulk Product Waste.
    iii. Selectively remove materials designated as PCBs ≥1.0 ppm and <50.0 ppm on **Figure 4A**. Dispose of these materials as Non-Hazardous PCB Remediation Waste.
    iv. Complete demolition on the second floor by removing flooring. Dispose of these materials as PCB Bulk Product Waste.
    v. Handscrape and collect any visible residue remaining on the surface of the wood ceiling rafters or floor joists to a maximum depth of 1/4 inches. Clean debris with HEPA vacuum. Clean remaining wood surfaces with HEPA Vacuum. Clean remaining concrete and masonry surfaces with water-wetted paper towel/rag, followed by a hexane-wetted paper towel/rag. Repair chiseled areas with a leveling course.
    vi. Montrose will then collect verification samples of the remaining floor joists in accordance with **Figure 5A** and **Table 3**. Use leveling course on wood floor joists to repair sample locations and other areas chiseled away during cleaning.
    vii. If verification samples are above 1 ppm then encapsulant will be applied per **Section 7.12.**
    viii. After receipt of analytical results remove containment and waste loadout structure.
b. **First Floor:** Conduct pre-cleaning activities, set-up containment and set-up waste load out structure.
    i. Scrape all loose and peeling paint from all surfaces and clean using wet cleaning methods and/or HEPA vacuuming techniques. Dispose of these materials as Hazardous PCB Remediation Wastes.

ii. Begin to selectively remove materials designated as PCBs ≥50.0 ppm on **Figure 4B**. Dispose of these materials as PCB Bulk Product Waste.
iii. Selectively remove materials designated as PCBs ≥1.0 ppm and <50.0 ppm on **Figure 4B**. Dispose of these materials as Non-Hazardous PCB Remediation Waste.
iv. Handscrape and collect any visible residue remaining on the surface of the wood ceiling rafters, floor joists to a maximum depth of 1/4 inches. Clean debris with HEPA vacuum. Clean remaining wood surfaces with HEPA Vacuum. Clean remaining concrete and masonry surfaces with water-wetted paper towel/rag, followed by a hexane-wetted paper towel/rag. Repair chiseled areas with a leveling course.
v. Dry ice blast paint off the eastern portion of the gymnasium walls as shown in **Figure 6A** until visible paint is no longer visible (maximum depth of 1/8 inches) and dispose as Non-Hazardous PCB Bulk Remediation Waste (Total PCBs< 50 ppm).
vi. Montrose will collect post remediation samples of the walls to remain as shown on **Figure 5B** and **Table 3** following cleaning. Following receipt of results apply two layers of differential color encapsulant coating on walls to remain as show in **Figure 6A** and discussed in **Section 7.8**.
vii. Remove containment and waste loadout structure following visual inspection.

c. **Basement Level**: Conduct pre-cleaning activities, set-up containment and set-up waste load out structure on the basement level.
i. Scrape all loose and peeling paint from all surfaces and clean using wet cleaning methods and/or HEPA vacuuming techniques. Dispose of these materials as Hazardous PCB Remediation Wastes.
ii. Begin to selectively remove materials designated as PCBs ≥50.0 ppm on **Figure 4C**. Dispose of these materials as PCB Bulk Product Waste.
iii. Selectively remove materials designated as PCBs ≥1.0 ppm and <50.0 ppm on **Figure 4C**. Dispose of these materials as Non-Hazardous PCB Remediation Waste.
iv. Dry ice blast paint off brick, concrete and mortar wall as shown in **Figure 4C** until visible paint is no longer visible (maximum depth of 1/8 inches) and dispose as Hazardous PCB Bulk Remediation Waste (Total PCBs> 50 ppm).
v. Handscrape and collect any visible residue remaining on the surface of the ceiling rafters, wood studs and remaining walls. Clean remaining wood surfaces with HEPA Vacuum. Clean remaining concrete and masonry surfaces with water-wetted paper towel/rag, followed by a hexane-wetted paper towel/rag. Repair chiseled areas with a leveling course.
vi. Montrose will collect post remediation samples from basement walls to remain as shown on **Figure 5C** and **Table 3** following cleaning. Following receipt of results apply two layer of differential color encapsulant coating on walls to remain as show in **Figure 6B** and discussed in **Section 7.8**.

d. Remove containment and waste loadout structure following visual inspection.

3. Complete remaining exterior abatement as shown on **Figures 4D** and **4E**. Use dust suppression during removal.

4. Perform soil remediation per **Section 7.9,** the CAP and its Amendment.
5. Miscellaneous completion activities, including final demolition and construction, Site cleanup, and disposal prior to turning the Site over to the General Contractor.

7.7 PCB Building Material Removal

The following summarizes the general procedure of removal of PCB building materials. Detailed building demolition plans are presented in **Figures 4A** through **4E**. Asbestos containing materials and lead based paint will be removed in accordance with Design Specifications currently under development.

- Work surfaces will be wetted as feasible to minimize dust during removal.
- Remove materials as shown in **Figures 4A** through **4E** using the general sequence provided in **Section 7.6**. As feasible removal of impacted materials shall be done with hand tools to minimize vibrations resulting in dust generation.
- As indicated in **Figure 4C** the presence and color of the flooring needs to be verified in Rooms 19 and 20 (boiler room). Given significant dust and grime building it could not be determined at the time of the TBA if the flooring in this area is painted. Following the initial cleaning floor paint color, if any, will be verified and compared against other results of other paints sampled to evaluate proper disposal. If needed, additional samples will be collected to evaluate the PCB content.
- Upon the completion of the initial removal activities, Montrose will visually inspect remaining building materials for potential residual PCB impacted building materials and paint that may have seeped to underlying/adjacent building materials. If paint is observed on the adjacent/underlying materials it will be removed and/or chiseled away until paint is no longer visible. For example, if paint is observed to have seeped to wooden floor joists through cracks in the first and second floors then the impacted wood will be chiseled out until no more paint is visible, or to a maximum depth of 1/4 inches. A leveling course will subsequently be applied in areas that were chiseled. See **Section 8** Contingency regarding encapsulation if this condition is encountered on the wooden floor joists.
- Waste debris generated during this project will be immediately collected and stored in labeled Hazardous PCB Remediation Waste, Non-Hazardous PCB Remediation Waste or PCB Bulk Product Waste containers at the end of each work shift. Waste shall be disposed of according to applicable regulatory requirements summarized in **Section 7.11.**
- Generally, after removal of impacted building materials the remaining building materials will be cleaned as follows:
    - Handscrape and remove any visible residue remaining on the surface.
    - Collect removed debris with HEPA vacuum.
    - HEPA vacuum remaining wood surfaces.
    - Clean remaining concrete and masonry surfaces with water-wetted paper towel/rag, followed by a hexane-wetted paper towel/rag.
- During work, equipment and tools used in the process will be decontaminated as specified in **Section 7.10**.

During basement slab removal dewatering is not anticipated due to the expected depth of excavations relative to depth to anticipated groundwater at the Site (over 25 ft bgs). The basement area will be backfilled and compacted

to within 6 inches of surrounding grade with clean fill soil, sand borrow material comprised of VTrans Standard Spec 703.03 (or approved equal), from a known off-Site source for which the material has been confirmed to be non-impacted and to meet the criteria for unrestricted land use.

7.7.1 Second Floor Building Material Verification Sampling

Following floor removal on the second-floor wood planking, verification samples will be collected of wood floor joists to evaluate if they have impacted by PCB containing paint. Samples will be collected by Montrose using a hand chisel. Samples shall be collected as shown on **Figure 5A** and in **Table 3**, or in locations where visible paint had been removed. In general, three samples will be collected per room/area. A water-wetted paper towel/rag will be used to hand wipe the sampling area prior to collecting the sample, with the objective of removing dust or surface grime.

For each sample at least 10 grams of wood will be collected. Samples will be collected to a maximum depth of 1/4 inches and in a way that does not impact the structural integrity of the wood floor joists. Attempts will be made to collect wood samples from a single, grab sample location; however, in order to maintain structural integrity of the floor joists, wood chips may need to be collected over an area across multiple adjacent floor joists and then be composited together. If necessary, composite samples will be collected from like materials, for example four discrete samples will be collected from four contiguous floor joists located equal distance from the wall. Following sample collection a leveling course will be used to repair sample locations by the Remedial Contractor.

Field notes collected during sampling will indicate date and time of collection, description of location, and include floor plan notations showing the exact location of the sample. Sampling will be completed per the December 2023 QAPP (QA#24013). In addition, one field equipment rinsate blank per non-dedicated piece of equipment and one matrix spike/matrix spike duplicate (MS/MSD) sample per twenty samples and one duplicate building material sample per ten samples for QA/QC purposes. Sampling tools shall be decontaminated between samples by first removing gross contamination, and then performing a final wipe using a clean hexane-wetted paper towel/rag. All samples shall be placed in laboratory-supplied jars and transported under chain-of-custody protocol to a certified laboratory for PCB analysis in accordance with the Method 3546 Microwave Extraction method and SW-846 8082 Aroclor analytical method. If samples are composited, mathematical correction will be applied to account for dilution.

7.8 Risk-Based Cleanup and Disposal Plan (40 CFR 761.61(c))

7.8.1 Location and Quantity of Impacted Building Materials

Approximately 6,250 sq. ft. of PCB impacted concrete, brick or motor walls will remain in the basement of the building and the eastern portion of the gymnasium walls following paint removal. The location of the walls to remain are depicted on **Figures 6A and 6B.**

7.8.2 Paint Removal

Paint will be removed from walls using dry ice blasting methods (or approved equal) in order to reduce amount of waste generated compared to sand blasting methods. Designated walls will be stripped until no visible paint is remaining (maximum depth 1/8 inches). Following dry ice blasting, all surfaces will be brushed off with a stiff

bristled brush and then vacuumed with a HEPA equipped filter. Following vacuuming the area will be wiped down first a water-wetted paper towel/rag, followed by a hexane-wetted paper towel/rag or disposable rag.

Paint, blasting media waste and decontamination waste will be transferred into 55-gallon DOT steel drums, or waste roll off container, with appropriate waste labeling for off-site disposal as Hazardous PCB Remediation Waste.

7.8.3 Post-Paint Removal Sampling

Following the paint removal procedure and cleaning described above, sampling of the designated wall surfaces will be completed to evaluate the residual PCB impacts to these areas. The purpose of the post-paint removal sampling is to document the concentrations of residual PCBs that may remain prior to encapsulation. As such, no additional remediation is proposed following sample collection.

One sample will be collected per wall immediately following cleaning with a bias to areas which previously exhibited the highest PCB concentrations prior to paint removal. Proposed sample locations are shown on **Figures 5A and 5B** and described on **Table 3.** Bulk samples will be collected by removing a minimum of 10 grams of representative material from suspected media using hand tools or a drill. Samples shall be collected to a depth of 1/2 inch.

Sampling will be completed per the December 2023 QAPP (QA#24013). In addition, one field equipment rinsate blank per non-dedicated piece of equipment, one duplicate building material sample per ten samples and one MS/MSD sample per twenty samples will be collected for QA/QC purposes. Sampling tools shall be decontaminated between samples by first removing gross contamination, and then performing a final wipe using a clean hexane-wetted paper towel/rag. All samples shall be placed in laboratory-supplied jars and transported under chain-of-custody protocol to a certified laboratory for PCB analysis in accordance with the Method 3546 Microwave Extraction method and SW-846 8082 Aroclor analytical method.

7.8.4 Encapsulation

The proposed encapsulant is Retro CoatTM provide by Land Science, a division of REGENESIS®. Retro-Coat™ will serve as a physical and vapor barrier for residual PCB the walls that are to remain. Although Retro-Coat™ has not specifically been shown to protect against off-gassing of PCB building materials, it has been demonstrated to be an effective vapor against volatile organic compounds (VOCs). Immediately following the collection of post-paint removal samples, a Land Science certified subcontractor will proceed to encapsulate the remaining walls of the basement and gymnasium. The foundation and gym walls designated to be encapsulated total approximately 6,250 square feet (SF) as shown on **Figures 6A** and **6B**. Encapsulation will consist of the following process:

1. Cover and protect the area as needed.
2. Perform necessary structural repairs and fill in open cracks 1/2” and greater should be v-notched to a 3/4” width by 1/2”with Retro-Coat Gel and allow to dry before next step.
3. Wipe down and hand sand surfaces to remove any loose material and vacuum for a final preparation. Prior to application walls must be dry, clean and structurally sound.
4. Apply a 6-mil layer primer coat of colored Retro Coat™ to the designated walls.

5. Apply one 20-mil coat of colored Retro Coat™ to the designated walls.
6. Remove the protective coverings.

The two coats of the encapsulant will be applied in accordance with manufacture's recommendations and in contrasting colors such that wear of the top layer may be more easily observed during the annual inspections (see **Section 8**, Long-Term Monitoring and Maintenance Plan). For Retro-Coat is expected to be applied either through spray application method as approved by the manufacturer or rolled on. Copies of the information sheets as well as the Safety Data Sheets components for Retro Coat™ is included **Appendix F.**

7.9 PCB Impacted Soil Excavation

PCB-impacted soil above the 1 ppm PCB Cleanup Level is present adjacent to the southwest loading dock to a maximum depth of 1.5 ft bgs. **Figure 3D** shows PCB soil analytical results and the extent of the proposed excavation area is shown on **Figure 4F**. The PCB Cleanup Level proposed for Site soils is ≤1 ppm in accordance with 40 CFR 761.61(a)(4) for a high occupancy area. An estimated 5 cubic yards (CY) of PCB impacted soil will be removed following building demolition activities.

Prior to excavation work, excavation areas will be properly identified. Excavations areas may be located by means of GPS, field measurements or similar. Excavation extents and will be marked with flags, poles or stakes. Excavations depths must be identified on the selected marker.

Montrose will oversee invasive work and the excavation and load-out of excavated material. The Remedial Contractor is responsible for safe execution of invasive work. Proposed details and notes related to excavation are shown on **Figure 4F.**

Additional non-PCB impacted soil will be excavated in unpaved areas of the Site to remove other contaminants per the VTDEC approved CAP.

7.9.1 Excavation Water

Dewatering is not anticipated due to the expected depth of excavations (~1.5 ft bgs) relative to depth to groundwater at the Site (over 25 ft bgs).

7.9.2 Verification Sampling

Verification sampling will be conducted in general accordance with 40CFR § 761.280-298 Subpart O "Sampling to Verity Completion of Self-Implementing Cleanup and on-site Disposal of Bulk PCB Remediation Waste and Porous Surfaces in Accordance with §761.61(a)(6)." Given the size of excavation is anticipated to be 90 sq. ft approximately four verification samples will be conducted utilizing a sampling grid with a maximum of 1.5 m (approximately 5 ft.) spacing, in accordance with 40 CFR 761.61 Subpart O. Approximate anticipated sample locations are shown on **Figure 4F** and **Table 4**.

Sampling will be completed per the December 2023 QAPP (QA#24013). One field equipment rinsate blank per non-dedicated piece of equipment, one duplicate building material sample per ten samples and one MS/MSD sample per twenty samples will be collected for QA/QC purposes. Sampling tools shall be decontaminated

between samples by first removing gross contamination, and then performing a final wipe using a clean hexane-wetted paper towel/rag. All samples shall be placed in laboratory-supplied jars and transported under chain-of-custody protocol to a certified laboratory for PCB analysis in accordance with the Method 3546 Microwave Extraction method and SW-846 8082 Aroclor analytical method.

7.9.3 Waste Management

Composite soil samples will be required by the disposal facility for waste characterization profiling purposes prior to their acceptance of the waste. This will be completed by Montrose who will collect one in-situ composite sample utilizing hand tools in the excavation area following the removal of overlying concrete/asphalt. Once it is confirmed that the soils contain < 50 mg/kg PCBs they will be considered non-hazardous and removed for disposal as Non-Hazardous PCB Remediation Waste. The Remedial Contractor shall "live-load" the contaminated soils into dump trucks and haul them directly to the off-Site disposal location under bill of lading.

7.9.4 Backfill

Once verification of the self-implementing cleanup is confirmed, the excavation will be backfilled and compacted with imported clean fill. The excavated areas would be backfilled to within 6 inches of surrounding grade with clean fill soil, sand borrow material comprised of VTrans Standard Spec 703.03 (or approved equal), from a known off-Site source for which the material has been confirmed to be non-impacted and to meet the criteria for unrestricted land use. As part of final Site work, the General Contractor will later import clean topsoil and seed to complete restoration of the excavated areas.

7.10 Decontamination Procedures

7.10.1 Field Sampling Equipment

Equipment decontamination is needed to prevent the potential or likelihood of cross-contamination during post-excavation verification sample collection. Field equipment falls into two categories: consumable and reusable. Consumable field equipment is dedicated equipment that is immediately disposed of once it is used. Consumable equipment is preferred and will be used to the maximum extent possible. Consumable equipment includes stainless steel trowels, scoopulas, drill bits and gloves used in sample collection for this project. The consumable equipment is exclusively used at a sample location/depth and then disposed in accordance with 40CFR § 761.61(a)(5)(v)(A) at facility permitted, licensed, or registered to manage municipal solid waste or nonmunicipal non-hazardous waste.

Reusable equipment, if needed, may consist of hand tools, shovels, etc. Equipment that is reused will be decontaminated between sampling locations. Dedicated sampling tools shall be decontaminated between samples Sampling equipment will be decontaminated with the double wash/rinse method as defined in 40 CFR 761 Subpart S. Sampling equipment will be decontaminated following the collection of each sample. The cleaning products will be used according to the manufacturer’s instructions. Use of a dedicated brush will be used for application of the product to reusable equipment. The equipment is then rinsed with de-ionized water.

7.10.2 Heavy Earthmoving Equipment

Prior to coming into contact with imported fill, or any other clean stone, and prior to leaving the Site, decontamination of heavy equipment that has come into contact with PCBs will be completed by the Remedial Contractor in accordance with 40 CFR § 761.7(C)"*Self-implementing decontamination procedures"*. The bucket, blade or other components shall first be decontaminated over a decontamination pad and shall be constructed of timbers and two layers of 8-mil polyethylene sheeting. Decontamination procedures shall include use of a pressure washer, followed by two rounds of spraying a solvent (such as diesel fuel or hexane) and hand wiping each application with disposal rags using the double wash/rinse method as defined in 40CFR § 761 Subpart S "*Double wash/Rinse Method for Decontamination Non-Porous Surfaces*". Wash fluids shall be collected and transferred to a 55-gallon drum for disposal in accordance with **Section 7.11**.

When decontamination is deemed complete Montrose will collect a verification wipe sample of the equipment and submit for laboratory analyses. The laboratory will be requested to provide a two-three business-day turnaround time to report the results. If results indicate residual PCB concentrations are above 10 ug/100 cm^2 on the equipment, the Remedial Contractor will be required to repeat the decontamination procedures above, followed by a second wipe sample verification by Montrose for laboratory analysis. No heavy equipment will be allowed to leave the Site without approval by Montrose.

7.10.3 Disposal of Decontamination Cleaning Liquids or Rinsates

Disposal of solvents, cleaners, and absorbent materials shall be done so in accordance with 40CFR § 761.79(g) *"Decontamination waste and residues".* Decontamination materials will be classified into the same waste stream as the material it last encountered. When in doubt, decontamination materials will be classified as Hazardous Bulk PCB Remediation Waste.

Liquid PCB remediation waste may be temporarily stored on-site in a water tight container such as a 55-gallon drum, caged Immediate Bulk Container (IBC) tote tank, frac tank, etc. and labeled accordingly during temporary on-site storage. Prior to off-site transportation and disposal, liquid samples will be collected in accordance with the requirements of a facility approved to dispose liquid PCB remediation waste. The Remedial Contractor will assist Montrose in obtaining samples for waste characterization, submitting them for laboratory analyses, and obtaining facility approval for transportation and disposal.

7.11 PCB Waste Disposal

PCB remediation waste will be disposed of off-Site in accordance with 40 CFR 761.61(a)(5).

Paint chips and associated particulates/dust will be disposed as PCB Remediation Waste with a PCB concentration ≥50 ppm which exhibit the TCLP characteristic for lead shall be disposed of in a hazardous waste landfill permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA, and a PCB disposal facility approved under 40 CFR 761.61. Disposal for this waste has been vetted and approved at the Waste Management RCRA/TSCA permitted facility in Emelle, Alabama.

Building materials (concrete, wood, plaster and other materials) with adhered paint exhibiting total PCB concentrations ≥50 ppm will be disposed as Solid PCB Bulk Product Waste. This material will be removed for off-Site disposal at a permitted hazardous waste disposal facility by permitted hazardous waste haulers in accordance

with 40 CFR 761.61(a)(5)(i)(B)(2)(iii). Wastes with PCB concentrations > 50 ppm are regulated as hazardous wastes by the state of Vermont and are required to be shipped under manifest to a RCRA Subtitle C permitted TSDF. Disposal for this waste has been vetted and approved at the Waste Management RCRA/TSCA permitted facility in Emelle, Alabama.

Building materials and soils will be disposed as Solid Non-Hazardous Bulk PCB Remediation Waste has a total PCB concentration >1 ppm and <50 ppm. This material will be removed for off-Site disposal at an appropriate facility that is permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and is permitted to accept PCBs by permitted, non-hazardous waste haulers, in accordance with 40 CFR 761.61(a)(5)(i)(B)(2)(ii) and 40 CFR 761.61(a)(5)(v)(A). It is proposed to dispose of this waste at the Coventry Landfill which is a local facility owned by Casella.

Disposal of liquid PCB waste from decontamination shall be done so in accordance with 40CFR § 761.79(g) *"Decontamination waste and residues".* Decontamination materials will be classified as Hazardous Bulk PCB Remediation Waste. Liquid non-PCB remediation waste that meets the decontamination standard listed in 40 CFR 761.79(b) will either be pumped to the local sewer following permit and approval from the Town of St. Johnsbury, or shipped to an appropriate disposal facility. The Remedial Contractor would obtain the sewer disposal permit, if needed.

Non-liquid cleaning materials and PPE, such as rags, gloves, booties, other disposable PPE, and similar materials will be disposed of in accordance with 40 CFR 761.61(a)(5)(v)(A) as Solid Non-Hazardous Bulk PCB Remediation Waste.

Applicable disposal paperwork will be kept on file and submitted in a final report. This includes the following types of documents:

- Notification of PCB Activity (Form 7710-53);
- Generator Waste Profiles;
- Disposal facility waste approval letters;
- Manifests for transportation of hazardous waste;
- Bills of Lading for transportation of non-hazardous waste;
- Certificates of Disposal for disposal of hazardous waste; and
- Weight tickets for disposal of non-hazardous waste.

7.12 Contingency Plan

A deviation from the Work Plan may be required should unexpected conditions be encountered. The following contingency plans have been developed if the situation is encountered during work.

- Verification sampling of building materials demonstrate PCB concentrations remain greater than 1 ppm in wood floor joists on the 2nd floor. Given the structural necessity of the floor joists it is not feasible that they be removed. Should this condition be encountered a two-layer epoxy coating shall be applied to the wood floor joists. For wood, it is proposed that ELASTO-GRIP® FC 151-1051 (or similar) which is a waterborne polyamine epoxy be used as follows (product information included in **Appendix F**):

- Prior to application a leveling compound will be used as needed and allowed to fully cure.
- Rough areas of the wood will be sanded, and debris will be cleaned with a with HEPA vacuum. All surfaces must be clean, dry and free of oil and grease prior to application.
- Two 1-millimeter coats will be applied in accordance with the manufacturer's directions. An additional deed restriction will need to be applied which requires future owners to maintain this coating.

Pre-occupancy indoor air testing for PCBs shall be conducted if this condition is encountered. Additionally, the long-term monitoring and mitigation plan discussed in **Section 8** will require should this condition be encountered additional annual indoor air monitoring on the 2nd floor of the building.

- Paint seepage through flooring onto joists on the 1st floor. If there is visible paint on the floor joists paint will be chiseled out to a maximum depth of 1/4 inches. Debris will be cleaned with a HEPA vacuum followed by a pressure washer (minimized water volume used) and wet vac. Chiseled areas will be filled with a leveling course. If visible paint remaining after 1/4 inches is removed a sample will be collected. If the sample results indicated a concentration above 1 ppm then a two-layer epoxy coating shall be applied to the wood floor joists using the procedure described in the above bullet.
- Concealed regulated buildings materials not previously known. Work will cease in the area of the previously untested materials, the materials will be tested and managed accordingly;
- Unexpected subsurface conditions are encountered including previously undetected structures or soil characteristics. This will be evaluated on a case by case at the time of work.
- Verification endpoint soil sampling reveals a greater extent of impact than expected. Should PCB-impacted soils with concentrations greater than 1.0 ppm be encountered or distributed in a wider area than anticipated following initial verification sampling, the excavation will be advanced until verification sampling results demonstrate that cleanup activities have been successful and remaining PCB concentrations are below 1.0 ppm. Additional excavation of PCB-impacted soil with concentrations greater than 1.0 ppm will be excavated and disposed of in accordance with **Section 7.9**.

Additional unexpected conditions, if any, will be reported to the Town of St. Johnsbury, VTDEC and EPA's Brownfield Project Officer immediately and a proposed deviation to the Work Plan will be submitted for approval as soon as possible. The proposed deviation plan will include details of the proposed changes and its effect on the overall remedy.

8 LONG TERM MONITORING AND MAINTENANCE

Following completion of the PCB remediation, a Long-Term Monitoring and Maintenance Plan will be developed to describe communication, monitoring and maintenance of residual PCB impacted foundation and building walls and any other surface where PCBs > 1 ppm remain under encapsulation. The plan will go into effect prior to building occupancy. The plan will remain in effect and monitoring shall continue until such time that EPA and VTDEC approves in writing that monitoring and maintenance activities are no longer required. Elements of the plan will include:

- Roles and responsibilities;
- Communication;
- Qualifications and Training;
- Inspection Protocol. The first inspection event will occur following construction, but before building occupancy;
- Indoor Air Sampling Methods and Action Levels per VTDEC's Indoor Air Testing for PCBs in Non-School Buildings Technical Guidance, 2022. The first indoor air sampling event will occur following construction, but before building occupancy;
- Reporting and Record Keeping; and
- Corrective Measures.

The plan will include requirements for annual indoor air sampling for PCBs and annual inspection of the encapsulant by an Environmental Professional. An annual report detailing the inspection, monitoring, repairs and changes to building operations will be provided to EPA and VTDEC.

A deed restriction will be applied with language that all current and future owners follow the Long-Term Monitoring and Maintenance Plan.

9 PROJECT SCHEDULE

The proposed project scheduled is included as **Appendix A.** If there are changes to the schedule, the following project participants will be notified via electronic mail:

- The Town of St. Johnsbury, or future property owner(s);
- EPA Project Officer; and
- VTDEC Project Manager.

10 CERTIFICATION

This PCB Cleanup Work Plan for the Site located at 1249 Main Street, St. Johnsbury, Vermont is owned by the Town of St. Johnsbury. This PCB Cleanup Work Plan includes self-implementing and risk-based cleanup and disposal approach which will be implement under the supervision of Montrose Environmental Solutions, Inc. The sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the Town of St. Johnsbury, 51 Depot Square, Suite 3, St. Johnsbury, VT 05819, and are available for EPA inspection (§ 761.61(a)(3)(i)(E)).

Joseph Kasprzak Digitally signed by Joseph Kasprzak
Date: 2024.03.15 08:46:54 -04'00'

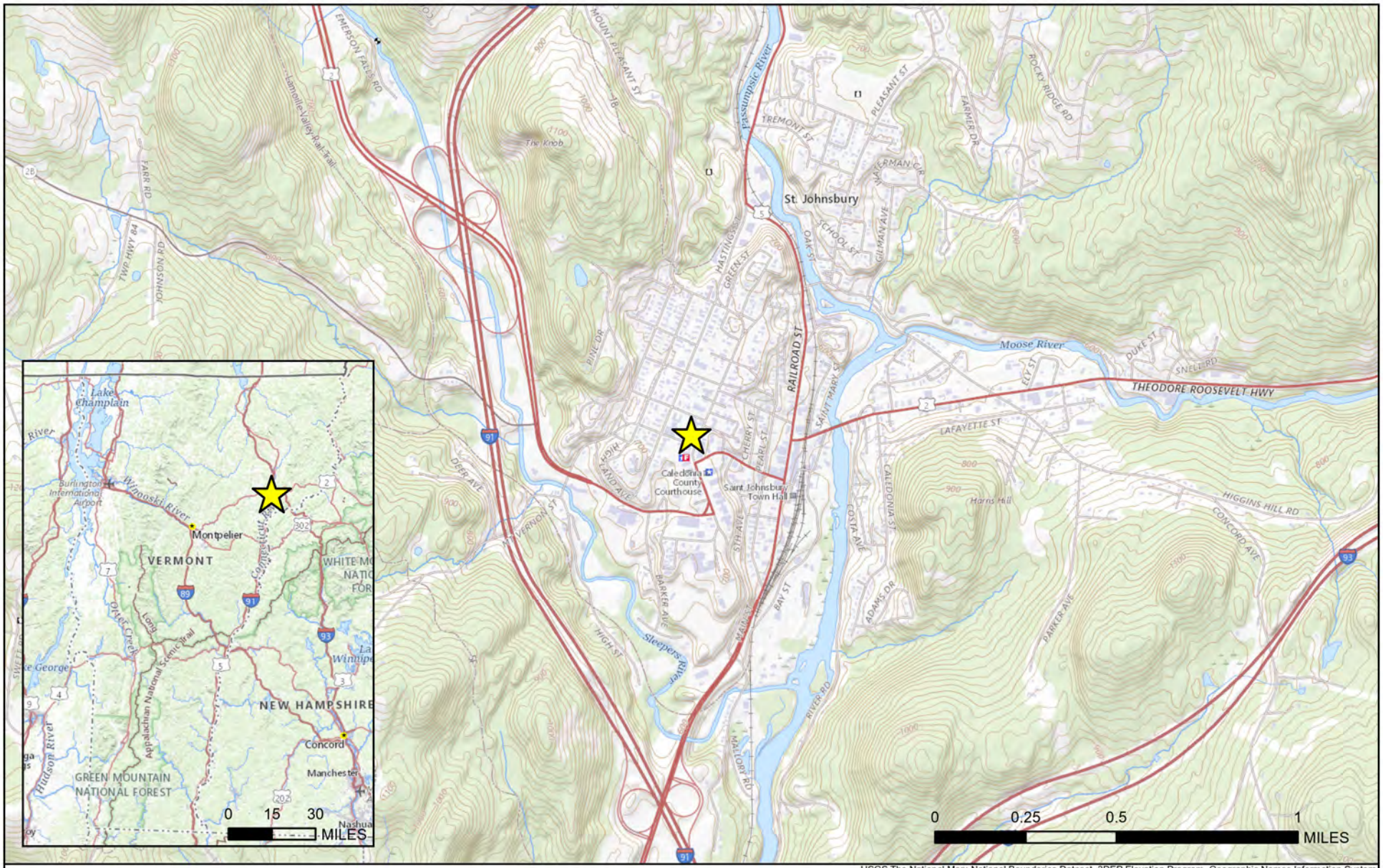
Joe Kasprzak
Assistant Town Manager

Kevin Ignaszak
Remediation Engineer

PAGE LEFT INTENTIONALLY BLANK

Figures

Figure 1	Site Location
Figure 2	Site Plan
Figure 3A	PCB Sample Locations – Second Floor (Level 2)
Figure 3B	PCB Sample Locations – First Floor (Level 1)
Figure 3C	PCB Sample Locations – Basement (Level 0)
Figure 3D	PCB Sample Locations – Exterior
Figure 4A	PCB Remediation Plan – Second Floor (Level 2)
Figure 4B	PCB Remediation Plan – First Floor (Level 1)
Figure 4C	PCB Remediation Plan – Basement (Level 0)
Figure 4D	PCB Remediation Plan – North and East Elevations
Figure 4E	PCB Remediation Plan – South and West Elevations
Figure 4F	PCB Remediation Plan – Soil Remediation and Proposed Verification Sample Locations
Figure 5A	Proposed Sample Locations – Second Floor (Level 2)
Figure 5B	Proposed Sample Locations – First Floor (Level 1)
Figure 5C	Proposed Sample Locations – Basement (Level 0)
Figure 6A	PCB Encapsulation – First Floor (Level 1)
Figure 6B	PCB Encapsulation – Basement

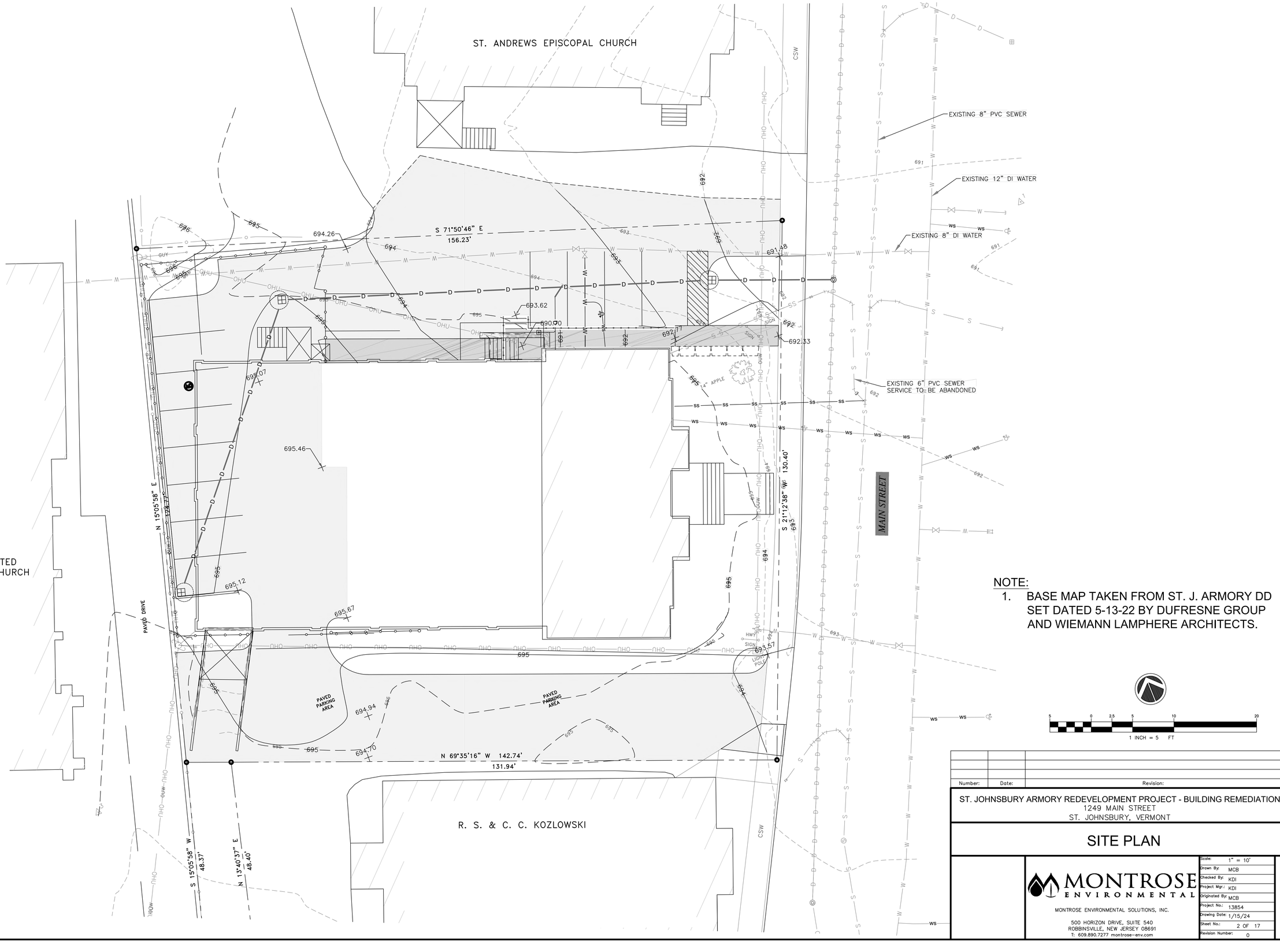


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.

CREATION DATE: JANUARY 8, 2024	PROJECT NO: PROJ-223533	FIGURE 1: SITE LOCATION
MONTROSE ENVIRONMENTAL	DRAWN BY: MNW / APPRV'D BY: KN	
	CHEK'D BY: KN / REVISION: 0	1249 MAIN STREET ST. JOHNSBURY, VT

W:\St. Johnsbury, Vermont\Figures\GIS\StJohnsburyVT.aprx

©2024 Environmental Standards, Inc. All rights reserved



NOTE:

1. BASE MAP TAKEN FROM ST. J. ARMORY DD SET DATED 5-13-22 BY DUFRESNE GROUP AND WIEMANN LAMPHERE ARCHITECTS.

5 0 2.5 5 10 20

1 INCH = 5 FT

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

SITE PLAN

MONTROSE ENVIRONMENTAL

MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
500 HORIZON DRIVE, SUITE 540
ROBBINSVILLE, NEW JERSEY 08691
T: 609.890.7277 montrose-env.com

Scale:	1" = 10'
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/15/24
Sheet No.:	2 OF 17
Revision Number:	0

FIGURE 2

O:\projects\Town of St. Johnsbury_13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\Plan Set.dwg

TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

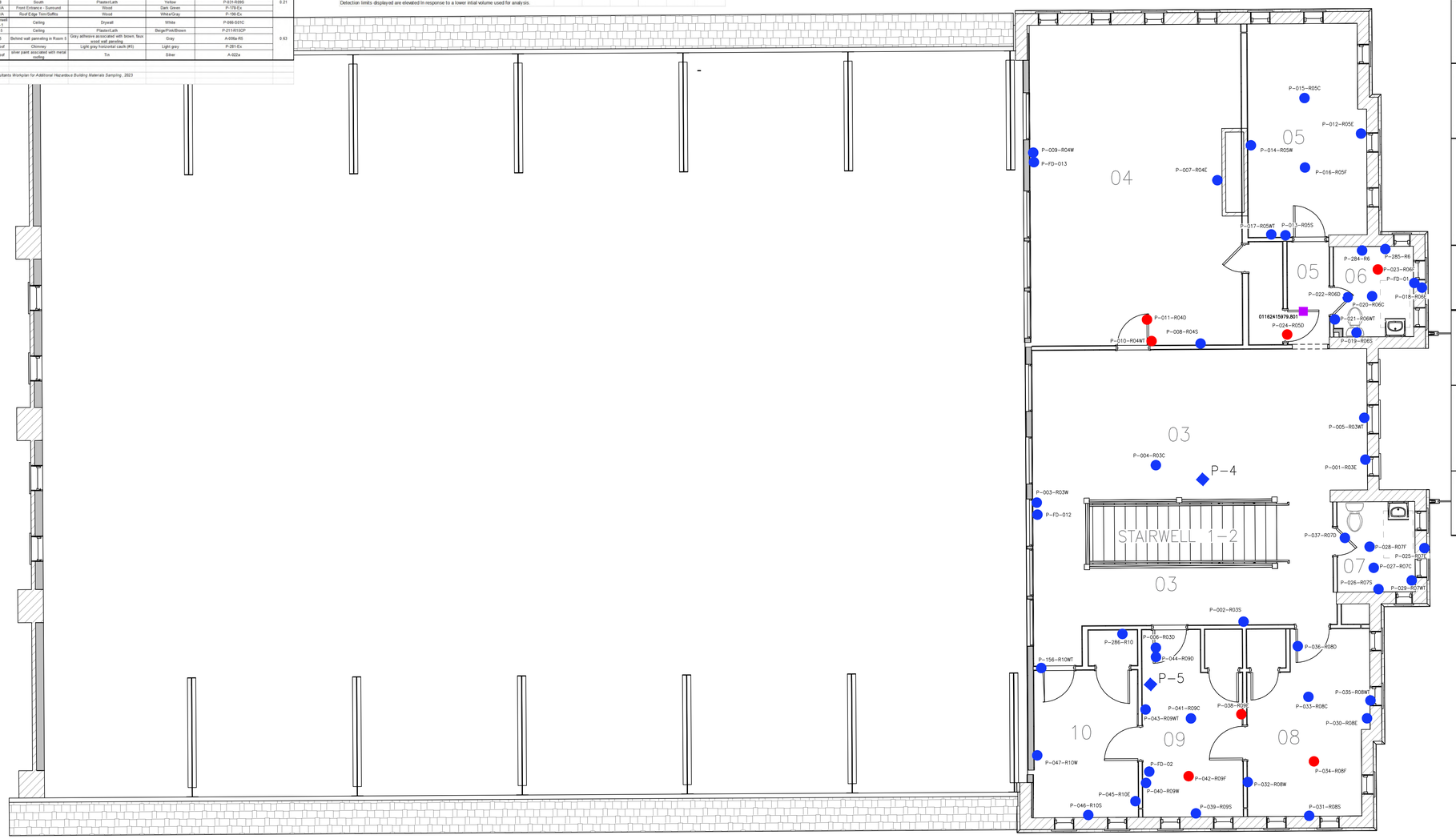
Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-20C (note-hvtaric sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-19D (note-hvtaric sample location unknown, sample gray floor paint)	
	Interior	1st Floor	10	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R10S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-223-R06F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-188-Ex (Note-sample white painted wood trim)	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Dk. Gray	P-67-M18C	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-68-R18E	
	Interior	Basement	20	West	Brick	Lt. Green	P-69-R20W	
	Interior	Basement	20	North	Concrete	Beige/Drk. Gray	P-66-R20C	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-65-R21E	28
	Interior	Basement	21	West	Brick	Blue/Lt. Green	P-64-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Dk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-266-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Dk. Blue	P-086-R22SPW	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green - high	P-263-R17EC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-231-R09S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-196-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell 1-2	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Behind wall paneling in Room 5	Gray adhesive associated with brown, faux wood wall panelling	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-022a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling*, 2023
mg/L = milligrams per liter

TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
01162415979.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
01162415979.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
"-" - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower intial volume used for analysis.



PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

Room	Direction	Substrate	Color	Sample ID	Total PCBs (ppm)
3	East	Plaster/Lath	Beige/Brown	P-001-R03E	37
	South	Plaster/Lath	Beige/Brown/Pink	P-002-R03S	46
	West	Plaster/Lath	Beige/Yellow/ Salmon/Brown	P-003-R03W	43
	Ceiling	Plaster/Lath	White	P-004-R03C	29
	Wood Trim	Wood Trim	Salmon	P-005-R03WT	58
	Door		Blue	P-006-R03D	41
	West	Plaster/Lath	Beige/Yellow/ Salmon/Brown	P-FD-012	41
4	East	Plaster/Lath	Beige/Salmon	P-007-R04E	23
	South	Plaster/Lath	Beige/Salmon	P-008-R04S	17
	West	Plaster/Lath	Beige/Salmon/Maroon	P-009-R04W	24
	Wood Trim		Drk. Beige	P-010-R04WT	51
	Door		Drk. Beige	P-011-R04D	50
	West	Plaster/Lath	Beige/Salmon/Maroon	P-FD-013	23
5	East	Plaster/Lath	Lt. Biege	P-012-R05E	18
	South	Plaster/Lath	Light Blue	P-013-R05S	31
	West	Plaster/Lath	Lt. Beige	P-014-R05W	22
	Ceiling	Drop Tiles	White	P-015-R05C	16
	Wood Trim		Lt. Beige	P-017-R05WT	35
	Door		Robin Egg Blue	P-023-R05FD	72
	Floor	Hardwood	Brown	P-016-R05F	21
6	East	Plaster/Lath	Drk. Beige/Lt. Green	P-018-R06E	23
	South	Plaster/Lath	Drk. Beige/Lt. Green	P-019-R06S	21
	South	Plaster/Lath	Drk. Beige/Lt. Green	P-019-R06S-MS/MSD	21
	Ceiling	Drywall	White	P-020-R06C	18
	Wood Trim		Robins egg Blue/Orange	P-021-R06WT	38
	Door		White	P-022-R06D	49
	Floor	Hardwood	Brown	P-023-R06F	52
	East	Plaster/Lath	Drk. Beige/Lt. Green	P-FD-01	21
		--	Celotex board - loose panels	P-284-R6	2.6
				P-285-R6	2.2
7	East	Plaster/Lath	Drk. Beige	P-025-R07E	22
	South	Plaster/Lath	Drk. Beige	P-026-R07S	14
	Wood Trim		Drk. Beige/Green	P-029-R07WT	35
	Door		Beige	P-037-R07D	19
	Ceiling	Drywall	White	P-027-R07C	33
	Floor	Hardwood	Brown	P-028-R07F	36
8	East	Plaster/Lath	Yellow/Green	P-030-R08E	20
	South	Plaster/Lath	Yellow	P-031-R08S	16
	West	Plaster/Lath	Yellow	P-032-R08W	11
	Ceiling	Plaster/Lath	White	P-033-R08C	20
	Wood Trim		Red/Maroon	P-035-R08WT	34
	Door		Red/Maroon	P-036-R08D	45
	Floor	Hardwood	Brown	P-034-R08F	51
9	East	Plaster/Lath	Blue/White	P-038-R09E	50
	South	Plaster/Lath	Yellow/Lt. Blue	P-039-R09S	17
	West	Plaster/Lath	Lt. Beige/Blue	P-040-R09W	16
	Ceiling	Plaster/Lath	White	P-041-R09C	14
	Wood Trim		Blue	P-043-R09WT	27
	Door		Blue	P-044-R09D	31
	Floor	Hardwood	Brown	P-042-R09F	56
	West	Plaster/Lath	Lt. Beige/Blue	P-FD-02	19
10	East	Plaster/Lath	White	P-045-R10E	13
	South	Plaster/Lath	White	P-046-R10S	21
	West	Plaster/Lath	White	P-047-R10W	19
	Wood Trim		White	P-156-R10WT	38
		--	Celotex board - walls of closet	P-286-R10	1.6

HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Sampled Material	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
4	Interior	Tar sealant?	Black tar	P-2	ND	Unknown
3	Interior	Wall Paint	Light pink	P-4	45	-
9	Interior	Wall Paint	Light blue	P-5	22	-

5 0 2.5 5 10 20
1 INCH = 5 FT

LEGEND

AUGUST 14 - DECEMBER 3, 2023 SAMPLING EVENT

P-046-R10S — SAMPLE LOCATION TOTAL PCB'S X<1 mg/kg
P-046-R10S — SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg
P-046-R10S — SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

HISTORIC SAMPLING EVENTS

P-5 — SAMPLE LOCATION TOTAL PCB'S <1 mg/kg
P-4 — SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg
P-5 — SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

JANUARY 16, 2023 PCB SAMPLING EVENT

SAMPLE LOCATION FOR TCLP PCB'S
03 — ROOM ID

NOTES:

1. BASE MAP TAKEN FROM ST. J. ARMORY DD SET DATED 5-13-22 BY DUFRESNE GROUP AND WIEMANN LAMPHERE ARCHITECTS.
2. HISTORIC SAMPLE INFORMATION OBTAINED FROM " WORK PLAN FOR ADDITIONAL HAZARDOUS BUILDING MATERIALS SAMPLING", ATLAS TECHNICAL CONSULTANTS, REVISED MARCH 20, 2023.
3. PCB SAMPLE RESULTS FROM AUGUST 14-DECEMBER 3, 2023 OBTAINED FROM "DATA SUMMARY TRANSMITTALS, ST. JOHNSBURY ARMORY-TARGETED BROWNFIELDS ASSESSMENT, PREPARED FOR EPA REGION 1, EPA CONTRACT NO 68HE0122R0005, SITE NO 68HE0122F0044-13, KGSNEJV II, LLC, DECEMBER 12, 2023"
4. ALL LOCATIONS SHOWN ARE APPROXIMATE.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

SECOND FLOOR (LEVEL 2) PCB SAMPLE LOCATIONS

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
500 HORIZON DRIVE, SUITE 540
ROBBINSVILLE, NEW JERSEY 08691
T: 609.890.7277 montrose-env.com

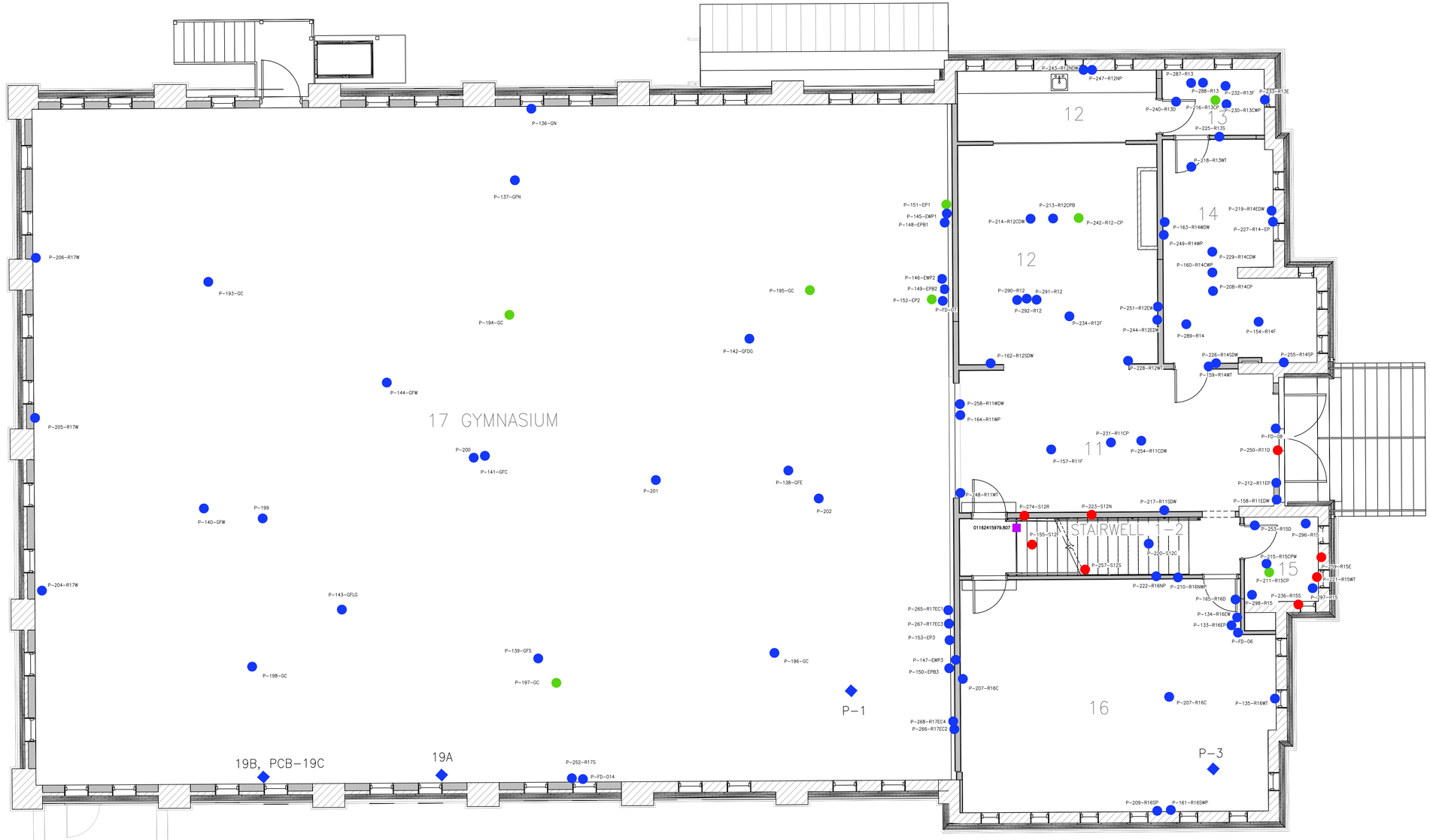
Scale:	1" = 5'
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/15/24
Sheet No.:	3 OF 17
Revision Number:	0

FIGURE 3A

O:\projects\Town of St. Johnsbury\13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\Plan Set.dwg

PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

Room	Direction	Substrate	Color	Sample ID	Total PCBs (ppm)
Stairwell 1-2	South	Plaster/Lath	White/Salmon	P-257-S12S	55
	North	Plaster/Lath	White	P-223-S12N	65
	Ceiling	Plaster/Lath	Beige/White/Red	P-220-S12C	19
	Wood Rails		Beige	P-274-S12R	50
	Floor	Wood Steps	Lt. Green/Orange/Blue	P-155-S12F	65
11	East	Drywall over	Beige/White	P-158-R11EDW	2.7
	East	Plaster/Lath	White/Orange/Lt. Green	P-212-R11EP	16
	South	Drywall over	Salmon	P-217-R11SDW	62
	West	Drywall over	Salmon	P-258-R11WDW	15
	West	Plaster/Lath	White	P-164-R11WP	20
	Ceiling	Drywall over	White	P-254-R11CDW	7.1
	Ceiling	Plaster/Lath	White	P-231-R11CP	1.7
	Wood Trim		Drk. Green/Beige/Blue	P-248-R11WT	33
	Door		White/Beige/Blue	P-250-R11D	50
	Floor	Hardwood	Brown	P-157-R11F	11
	East	Drywall over	Beige/White	P-FD-08	5.8
12	East	Drywall over	Beige/White	P-244-R12EDW	5.5
	East	Plaster/Lath	Beige/Blue	P-251-R12EW	10
	South	Drywall over	Lt. Yellow	P-162-R12SDW	6.9
	North	Drywall over	White	P-243-R12NDW	6.6
	North	Plaster/Lath	White	P-247-R12NP	2.4
	Ceiling	Drywall	White	P-231-R12CDW	5.3
	Ceiling	Particle board	White	P-213-R12CPB	9
	Ceiling	Plaster/Lath	White	P-242-R12-CP	0.66
	Wood Trim		Green/Blue	P-228-R12WT	26
	Floor	Hardwood	Brown	P-234-R12F	13
		Carpet remnant fibers on wood floor	--	P-290-R12	3.3
				P-291-R12	2.7
				P-292-R12	3.4
13	East	Plaster/Lath	Drk. Green/Lt. Green	P-233-R13E	8.3
	South	Plaster/Lath	Lt. Green/Drk. Green	P-225-R13S	4.5
	Ceiling	Wood Panel	White	P-230-R13CWP	4.5
	Ceiling	Plaster/Lath	White	P-216-R13CP	0.21
	Wood Trim		Dark Blue	P-218-R13WT	11
	Door		White Beige	P-240-R13D	25
	Floor	Hardwood	Brown	P-225-R13F	27
		Mastic on Wood Floor	Beige	P-287-R13	4.3
				P-288-R13	2.2
14	East	Drywall	Beige	P-219-R14EDW	6.8
	East	Plaster/Lath	White	P-227-R14-EP	4.8
	South	Drywall	Salmon	P-226-R14SDW	12
	South	Plaster/Lath	White	P-255-R14SP	5.3
	West	Drywall	Beige/Yellow	P-163-R14WDW	5.6
	West	Plaster/Lath	Pink	P-249-R14WP	1.5
	Ceiling	Drywall	White	P-229-R14CDW	8.9
	Ceiling	Drop Ceiling Wood Panel	White	P-160-R14CWP	8.3
	Ceiling	Plaster/Lath	White	P-208-R14CP	1.4
	Wood Trim		Green/Blue	P-159-R14WT	20
	Floor	Hardwood	Brown/Yellow	P-154-R14F	12
		Mastic on Wood Floor	Beige	P-289-R14	11
15	East	Plaster/Lath	Pink, Green, White, Brown	P-296-R15E	50
	South	Plaster/Lath	Pink, Green, White, Brown	P-216-R15S	60
	Ceiling	Plywood panel	Beige/Pink/Brown	P-215-R15CPW	25
	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	0.59
	Wood Trim		Lt. Brown/Blue/White	P-221-R15WT	45
	Door		Drk. Green/White	P-253-R15D	32
		Old Linoleum Mastic	--	P-296-R15	7.6
				P-297-R15	13
				P-298-R15	10
16	East	Wood Panel	White	P-134-R16EW	21
	East	Plaster/Lath	Lt. Green/Drk. Green	P-133-R16EP	5.5
	South	Wood Panel	White	P-161-R16SWP	35
	South	Plaster/Lath	Green	P-209-R16SP	4.4
	North	Wood Panel	Green/White	P-210-R16NWP	26
	North	Plaster/Lath	White	P-222-R16NP	16
	Ceiling	Plaster/Lath	White	P-207-R16C	16
	Wood Trim		Drk. Green	P-135-R16WT	33
	Door			P-165-R16D	34
	East	Plaster/Lath	Lt. Green/Drk. Green	P-FD-06	5.6
Gym	East	Wood panelling	White	P-145-EWP1	3.4
			White	P-146-EWP2	5.8
			White/Green	P-147-EWP3	5.6
		Particle Board	Green	P-148-EPB1	9.3
			Green	P-149-EPB2	4.7
			Green	P-150-EPB3	19
		Plaster/Lath	White	P-151-EP1	0.55
			White	P-152-EP2	0.62
			White	P-153-EP3	1.2
		Cellotex		P-265-R17EC1	6.3
				P-266-R17EC2	5.3
				P-267-R17EC3	2.9
				P-268-R17EC4	3.1
	South	Brick	White/Blue	P-252-R17S	12
	West	Brick	White/Yellow	P-204-R17W	4.8
				P-205-R17W	8.2
				P-206-R17W	10
	North	Brick	White/Yellow/Green	P-136-GN	6.1
	Ceiling	Particle board/plywood	White/Beige	P-194-GC	1.6
				P-196-GC	0.64
				P-195-GC	0.85
				P-196-GC	1.5
				P-197-GC	0.57
				P-198-GC	1.1
		Metal Girders	White	P-199	7.6
				P-200	4.6
				P-201	7.9
				P-202	8.5
		Hardwood/polyurethane	Brown	P-137-GFN	.3
			Brown	P-138-GFE	3.6
			Brown	P-139-GFS	7.1
			Brown	P-140-GFW	4.1
			Brown	P-141-GFC	7.9
	Floor	Hardwood/Dk green	Drk.Green	P-142-GFDG	3.7
	Floor	Hardwood/Lt green	Lt. Green	P-143-GFLG	13
	Floor	Hardwood/White	White	P-144-GFW	1.4
	South	Brick	White/Blue	P-FD-014	6.1
	East	Wood Panel/ig	White	P-FD-07	4.9



NOTES:

1. BASE MAP TAKEN FROM ST. J. ARMORY DD SET DATED 5-13-22 BY DUFRESNE GROUP AND WIEMANN LAMPHERE ARCHITECTS.
2. HISTORIC SAMPLE INFORMATION OBTAINED FROM " WORK PLAN FOR ADDITIONAL HAZARDOUS BUILDING MATERIALS SAMPLING", ATLAS TECHNICAL CONSULTANTS, REVISED MARCH 20, 2023.
3. PCB SAMPLE RESULTS FROM AUGUST 14-DECEMBER 3, 2023 OBTAINED FROM "DATA SUMMARY TRANSMITTALS, ST. JOHNSBURY ARMORY-TARGETED BROWNFIELDS ASSESSMENT, PREPARED FOR EPA REGION 1, EPA CONTRACT NO 68HE0122R0005, SITE NO 68HE0122F0044-13, KGSNEJV II, LLC, DECEMBER 12, 2023"
4. ALL LOCATIONS SHOWN ARE APPROXIMATE.

LEGEND

AUGUST 14 - DECEMBER 3, 2023 SAMPLING EVENT

- P-046-R10S — SAMPLE LOCATION TOTAL PCB'S X<1 mg/kg
- P-046-R10S — SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg
- P-046-R10S — SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

HISTORIC SAMPLING EVENTS

- P-5 — SAMPLE LOCATION TOTAL PCB'S <1 mg/kg
- P-4 — SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg
- P-5 — SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

JANUARY 16, 2023 PCB SAMPLING EVENT

- 01162415979.807 — SAMPLE LOCATION FOR TCLP PCB'S
- 03 — ROOM ID

5 0 2.5 5 10 20

1 INCH = 5 FT

TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-200 (note-historic sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-160 (note-historic sample location unknown, sample grey floor paint)	
	Interior	1st floor	15	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R15S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-223-R09F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-186-Ex (Note-sample white painted wood trim)	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Drk. Grey	P-251-R19NC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R19E	
	Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	
	Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-056-R20NC	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-058-R21EB	28
	Interior	Basement	21	West	Brick	Black/Lt. Green	P-264-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-078-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-080-R22SPW	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green - high	P-265-R17EC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-031-R08S	
	Exterior	N/A	N/A	Front Entrance - Sueround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-196-Ex	
WC-Lead-Comp 5	Interior	Basement	Mezzanine/ 0-1	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Behind wall panneling in Room 5	Gray adhesive associated with brown, faux wood wall panneling	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-022-e	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants Workplan for Additional Hazardous Building Materials Sampling , 2023
mg/L = milligrams per liter

TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
01162415979.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
01162415979.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
'-' - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower initial volume used for analysis

HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Sampled Material	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
Gym / 17, South Side	Interior	Wall Paint	White	19A	7.4	-
	Interior			19B	7.4	-
	Interior			PCB-19C	9	-
Gym / 17	Interior	Paper Under Flooring	Unknown	P-1	4.4	-
16	Interior	Paper Under Flooring	Unknown	P-3	7.8	-

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

FIRST FLOOR (LEVEL 1)
PCB SAMPLE LOCATIONS

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
500 HORIZON DRIVE, SUITE 540
ROBBINSVILLE, NEW JERSEY 08691
T: 609.890.7277 montrose-env.com

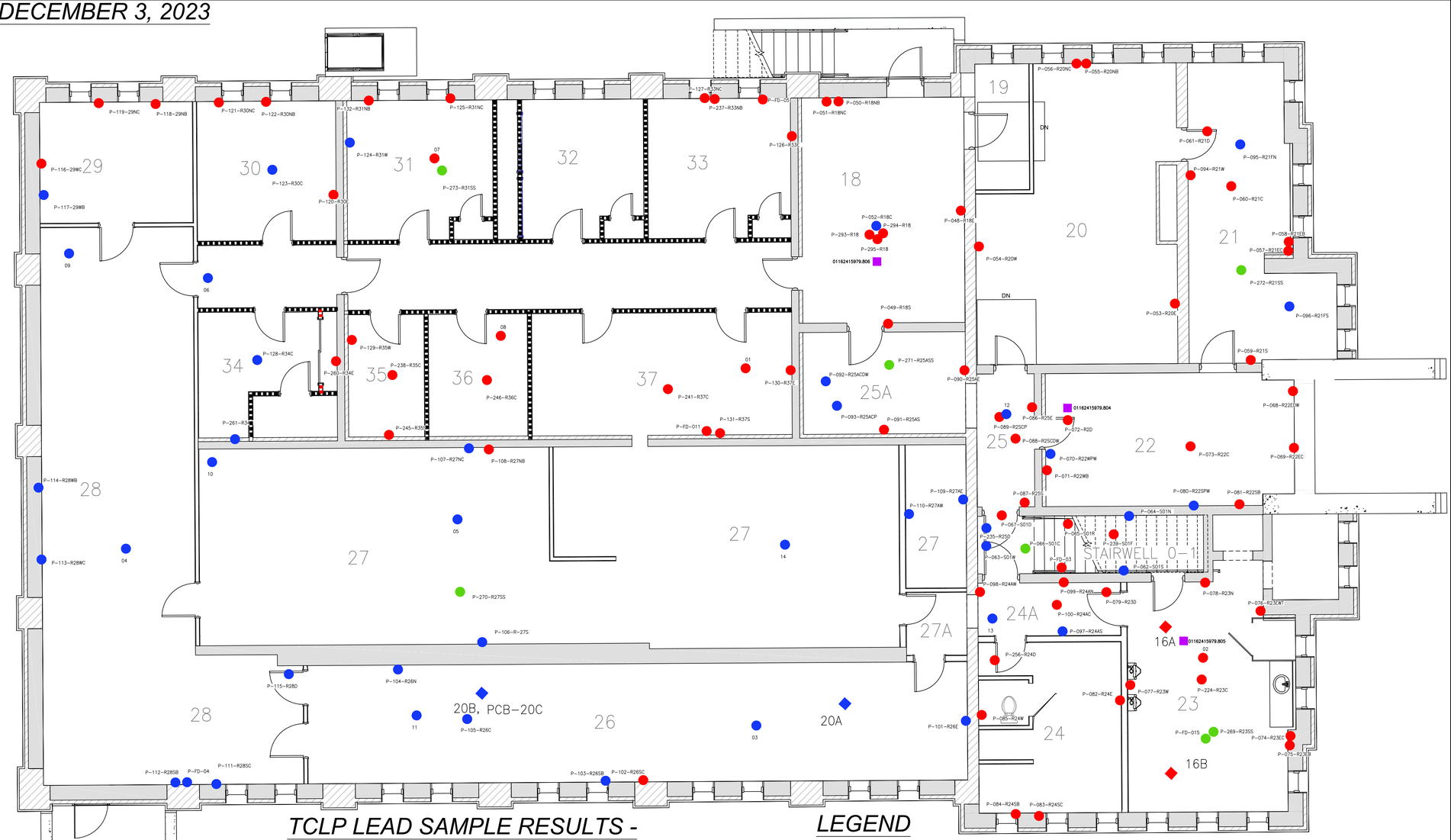
Scale:	1" = 5'
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/15/24
Sheet No.:	4 OF 17
Revision Number:	0

FIGURE 3B

O:\projects\Town of St. Johnsbury 13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\Plan Set.dwg

PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

Room	Direction	Substrate	Color	Sample ID	Total PCBs (ppm)
Stairwell 0-1	South	Plaster/Lath	Beige/Green/Brown	P-066-S01S	18
	West	Plaster/Lath	Beige/Green/Brown	P-065-S01W	40
	North	Plaster/Lath	Beige/Brown	P-064-S01N	43
	Ceiling	Drywall	White	P-066-S01C	0.33
	Wood Rails		Drk. Green	P-066-R1RC	33
	Door		White/ Drk. Green	P-067-S01D	64
	Floor	Wood Steps	White/Drk. Green/ Black/Brown/ Lt. Blue	P-239-S01F	110
18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	180
	South	Brick	Lt. Blue/ White	P-049-R18S	130
	North	Concrete	White/Green/Drk. Grey	P-051-R18NC	290
		Brick	White/Beige	P-050-R18NB	150
	Ceiling	Pressed tin	Drk. Beige/Black	P-052-R18C	19
		Mastic on underside of VFT	Black	P-293-R18	5700
				P-294-R18	6000
				P-295-R18	6800
20	East	Brick	White/Dark Grey	P-051-R20E	4000
	West	Brick	Lt. Green	P-054-R20W	5700
	North	Concrete	Beige/Drk. Grey	P-056-R20NC	6400
		Brick	Lt. Green	P-055-R20NB	1300
21	East	Concrete	Lt. Blue/ Brown	P-057-R21EC	56
		Brick	Pink/Lt. Green/Brown	P-058-R21EB	52
	South	Brick	White/lt. Blue	P-059-R21S	380
	West	Brick	Blue/Lt. Green	P-096-R21W	51
	Ceiling	Drywall over ??	White	P-060-R21C	30
	Door		Lt. Blue/White/ Green/Orange/yellow	P-061-R21D	52
	Floor	Beige Painted Concrete	Grey/Beige	P-095-R21FN	21
	Floor	Beige Painted Concrete	Grey/Beige	P-096-R21FS	26
22	East	Painted Drywall	Yellow/White	P-068-R22EW	75
	East	Concrete Foundation	Brown	P-069-R22EC	460
	South	Printed Plywood	Yellow/Drk. Blue	P-080-R22SPW	25
	South	Brick	Lt. Blue	P-081-R22SB	220
	West	Painted Plywood	White	P-070-R22WPW	21
	West	Brick	Lt. Blue	P-071-R22WB	280
	Ceiling	2x4 wood	White	P-073-R22C	87
	Door		White	P-072-R22D	200
23	East	Concrete	Salmon/Drk. Green	P-075-R23EC	150
		Brick	Salmon/Lt. Green/White	P-076-R23EWT	68
	West	Brick	Salmon/Lt. Green	P-077-R23W	120
	North	Brick	Salmon	P-079-R23N	150
	Ceiling	Pressed tin over lath	White	P-224-R23C	980
	Wood Trim		Drk. Green/White	P-076-R23EWT	70
	Door		White/Drk. Blue	P-078-R23D	74
24	East	Brick	Salmon/White/Lt. Green	P-082-R24E	120
	South	Concrete	Beige/ Lt. Green	P-083-R24SC	130
		Brick	Beige/ Lt. Green	P-084-R24SB	130
	West	Brick	White/Lt. Green	P-085-R24W	110
	Door		White/Beige	P-100-R24D	50
24A	South	Painted plywood	White/Beige	P-097-R24AS	42
	West	Brick	White/Lt. Green	P-098-R24AW	200
	North	Brick	Beige/ Lt. Green	P-099-R24AN	150
	Ceiling	Drywall over ??		P-100-R24AC	110
25	East	Brick	White/ Lt. Green/ Maroon	P-086-R25E	100
	South	Brick		P-087-R25S	90
	Ceiling	Drywall	Beige	P-088-R25CDW	66
	Ceiling	Plaster/Lath	Beige	P-089-R25CP	76
	Door		Drk. Blue	P-235-R25D	19
25A	East	Brick	Lt. Green	P-090-R25AE	250
	South	Brick	Lt. Green	P-091-R25AS	160
	Ceiling	Drywall	Beige	P-092-R25A CDW	97
	Ceiling	Plaster/Lath	Beige	P-093-R25ACP	90
26	East	Brick	White	P-101-R26E	48
	South	Concrete	White	P-102-R26SC	80
		Brick	White	P-103-R26SB	56
	North	CMU	White	P-104-R26N	42
	Ceiling	Drywall over lath	White	P-105-R26C	7.9
27	South	CMU	White	P-106-R-27S	42
	North	CMU	White/Pink	P-107-R27NC	50
	North	Brick	White	P-108-R27NB	80
27A	East	Brick	Lt. Green/Red/White	P-109-R27AE	12
	West	CMU	White	P-110-R27AW	23
28	South	Concrete	White	P-111-R28SC	19
		Brick	White	P-112-R28SB	11
	West	Concrete	Lt. Green/Pink/Lt. Blue	P-113-R28WC	29
		Brick	Lt. Green/Lt. Pink	P-114-R28WB	16
	Door		White/Lt. Green	P-115-R28D	27
29	West	Concrete		P-116-29WC	60
		Brick		P-117-29WB	17
	North	Concrete		P-119-29NC	31
		Brick	Lt. Green/Yellow	P-118-29NB	72
30	East	Brick	Lt. Green/White	P-120-R30E	170
	North	Concrete	Lt.Green/White	P-122-R30NC	130
		Brick	Lt. Green/White	P-121-R30NB	94
	Ceiling	Drywall over lath	White	P-123-R30C	31
31	West	Brick	Drk. Green/White	P-124-R31W	28
	North	Concrete	White	P-132-R31NC	260
		Brick	White	P-132-R31NB	250
33	East	Brick	Lt. Green	P-126-R33E	300
	North	Concrete	Lt. Green/White	P-127-R33NC	150
		Brick	Lt. Green	P-237-R33NB	120
34	East	Brick	Lt. Green	P-240-R34E	297
	South	CMU	White	P-241-R34S	52
	Ceiling	Drywall over lath	White	P-128-R34C	43
35	South	Brick	White/Lt. Green	P-245-R35S	220
	West	Brick	White/Lt. Green	P-129-R35W	180
	Ceiling	Pressed tin over lath	White/ Brown	P-238-R35C	130
36	Ceiling	Pressed tin over lath		P-246-R36C	150
37	East	Brick	Lt. Green	P-130-R37E	400
	South	Brick	Lt. Green	P-131-R37S	270
	Ceiling	Pressed tin over lath	White/Brown	P-241-R37C	95
23	N/A	Soil	--	P-269-R23SS	ND
27		Soil	--	P-270-R27SS	ND
25A		Soil	--	P-271-R25ASS	ND
21		Soil	--	P-272-R21SS	ND
31		Soil	--	P-273-R31SS	ND
Stairwell 0-1	Wood Rails		Drk. Green	P-FD-01	112
28	South	Brick	White	P-FD-04	103
33	North	Concrete	Lt. Green/White	P-FD-05	180
37	South	Brick	Lt. Green	P-FD-011	210
23	N/A	Soil	--	P-FD-015	ND



TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
011624159791.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159791.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
011624159791.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159791.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159791.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159791.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159791.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159791.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
'-' - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower initial volume used for analysis.

Table 4: PCB Concrete Core Sample Results- November 27, 2017:

Sample Location	Results mg/kg (ppm) 0.0 to 0.25" depth	Results mg/kg (ppm) 0.25 to 0.50" depth	Results mg/kg (ppm) 0.50 to 1.0" depth	Results mg/kg (ppm) 1.0 to 1.5" depth	Results mg/kg (ppm) 0.0 to 0.50" depth
01- Room 37	1,040	650	226	310	NS
02- Room 23	82	45	3.3	2.5	NS
03- Room 26	20.3	3.5	3.2	0.12	NS
04- Room 28	26	20.6	4.7	0.75	NS
05- Room 27	41	6.3	2.59	1.99 (1.3)	NS
06- Room Hall between Rooms 30 and 34	14.8	3.89	0.40	0.87	NS
07- Room 31	106	58	36	41	NS
08- Room 36	NS	NS	NS	NS	180
09- Room 28	NS	NS	NS	NS	1.6
10- Room 27	NS	NS	NS	NS	7.0
11- Room 26	NS	NS	NS	NS	4.3
12- Room 25	NS	NS	NS	NS	14
13- Room Hall Between Rooms 24 and 25	NS	NS	NS	NS	16
14- Room 27	NS	NS	NS	NS	1.9

NS- No Sample collected for interval depth (#) - Duplicate sample for QA/QC purposes

TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-20C (note-historic sample location unknown, sample blue floor paint)	6.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-16D (note-historic sample location unknown, sample grey floor paint)	
	Interior	1st floor	15	South	Plaster/Lath	Pink, Green, White, Brown	P-066-S01S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-237-R33NB	
	Exterior	N/A	N/A	Southwest- Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	Wood Trim/Soffit/Door & Sheet Metal walls	P-188-Ex (Note-sample white painted wood	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Drk. Grey	P-051-R18NC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	
	Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	
	Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-056-R20NC	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-058-R21EB	28
	Interior	Basement	21	West	Brick	Blue/Lt. Green	P-096-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-086-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-080-R22SPW	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green - high	P-265-R17EC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-031-R08S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Grey	P-196-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell 0-1	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Behind wall- pannealing in Room 5	Grey adhesive associated with brown, faux wood wall paneling	Grey	A-008a-R8	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#1)	Light gray	P-261-Ex	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-022a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants Workplan for Additional Hazardous Building Materials Sampling , 2023
mg/L = milligrams per liter

HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Substrate	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
26	Interior	Floor Paint	Blue	20A	27	-
26	Interior			20B	44	-
Unknown	Interior			PCB-20C	67	-
23	Interior	Floor Paint	Grey	16A	5700	-
23	Interior			16B	4600	-
Unknown	Interior			16C	5700	Unknown
Unknown	Interior			PCB-16D	20000	Unknown

LEGEND

AUGUST 14 - DECEMBER 3, 2023 SAMPLING EVENT

P-046-R10S SAMPLE LOCATION TOTAL PCB'S X<1 mg/kg

P-046-R10S SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg

P-046-R10S SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

HISTORIC SAMPLING EVENTS

P-5 SAMPLE LOCATION TOTAL PCB'S <1 mg/kg

P-4 SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg

P-5 SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

JANUARY 16, 2023 PCB SAMPLING EVENT

01162415979.801 SAMPLE LOCATION FOR TCLP PCB'S

03 ROOM ID

FORMER BASEMENT WALLS AND DOORS, ONLY WOOD STUDS REMAIN AS PART OF THE EXISTING CONDITIONS.

5 0 2.5 5 10 20

1 INCH = 5 FT

NOTES:

1. BASE MAP TAKEN FROM ST. J. ARMORY DD SET DATED 5-13-22 BY DUFRESNE GROUP AND WIEMANN LAMPHERE ARCHITECTS.
2. HISTORIC SAMPLE INFORMATION OBTAINED FROM " WORK PLAN FOR ADDITIONAL HAZARDOUS BUILDING MATERIALS SAMPLING", ATLAS TECHNICAL CONSULTANTS, REVISED MARCH 20, 2023.
3. PCB SAMPLE RESULTS FROM AUGUST 14-DECEMBER 3, 2023 OBTAINED FROM "DATA SUMMARY TRANSMITTALS, ST. JOHNSBURY ARMORY-TARGETED BROWNFIELDS ASSESSMENT, PREPARED FOR EPA REGION 1, EPA CONTRACT NO 68HE0122R0005, SITE NO 68HE0122F0044-13, KGSNEJV II, LLC, DECEMBER 12, 2023"
4. ALL LOCATIONS SHOWN ARE APPROXIMATE.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

BASEMENT (LEVEL 0) PCB SAMPLE LOCATIONS

MONTROSE ENVIRONMENTAL

MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
500 HORIZON DRIVE, SUITE 540
ROBBINSVILLE, NEW JERSEY 08691
T: 609.890.7277 montrose-env.com

Scale:	1" = 5'
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	138S4
Drawing Date:	1/15/24
Sheet No.:	5 OF 17
Revision Number:	0

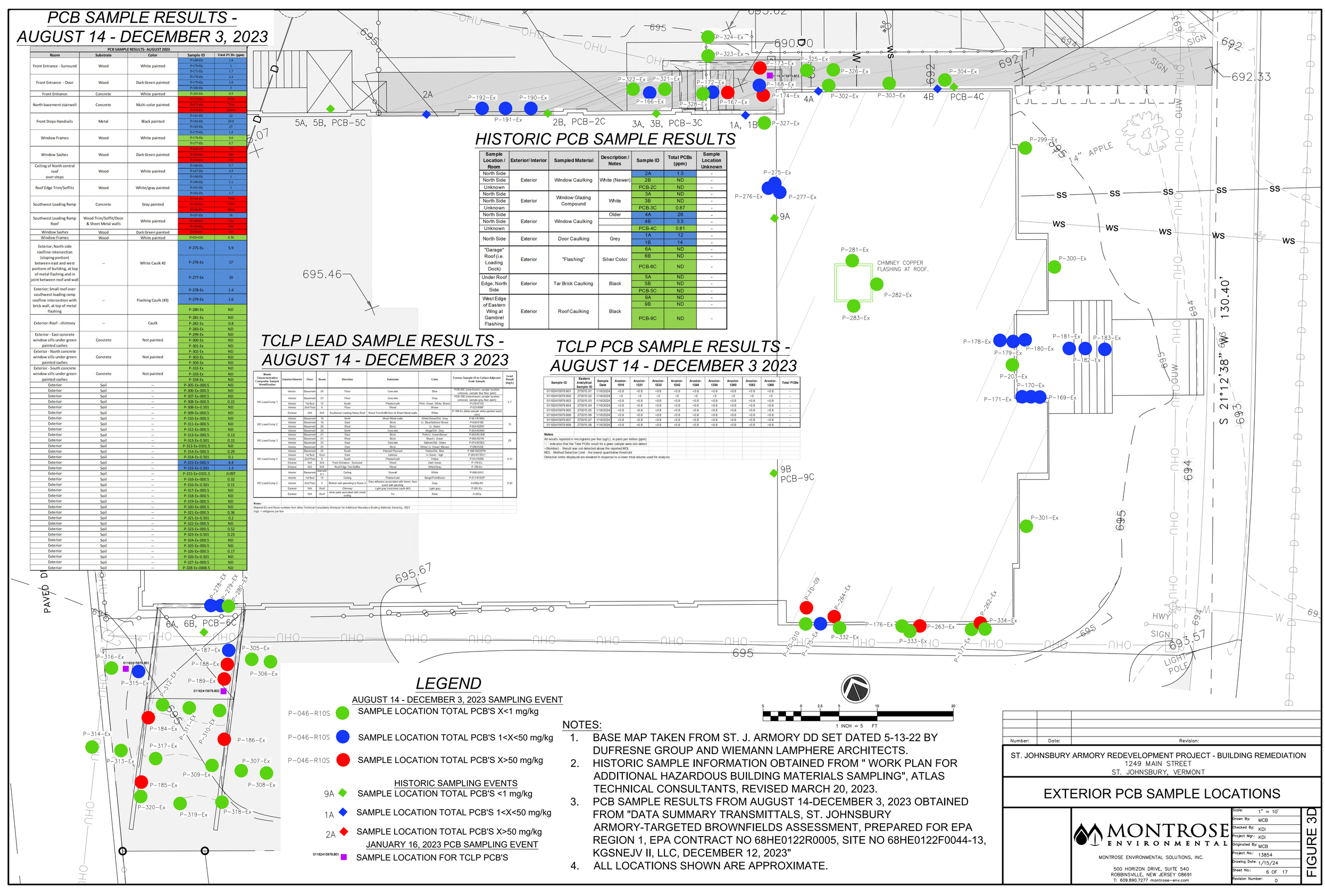
FIGURE 3C

O:\projects\Town of St. Johnsbury-138S4\138S4-01\Field Data and Supporting Documents\Atlas Files_June 2023\Plan Set.dwg

PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

PCB SAMPLE RESULTS- AUGUST 2023

Room	Substrate	Color	Sample ID	Total PCBs (ppm)
Front Entrance - Surround	Wood	White painted	P-169-Ex	1.8
			P-170-Ex	1
			P-171-Ex	1.7
Front Entrance - Door	Wood	Dark Green painted	P-178-Ex	2.4
			P-179-Ex	1.8
			P-180-Ex	1
Front Entrance	Concrete	White painted	P-203-Ex	0.5
North basement stairwell	Concrete	Multi-color painted	P-172-Ex	9700
			P-173-Ex	7100
			P-174-Ex	20000
Front Steps Handrails	Metal	Black painted	P-181-Ex	22
			P-182-Ex	20.8
			P-183-Ex	25
			P-175-Ex	1.8
Window Frames	Wood	White painted	P-176-Ex	0.6
			P-177-Ex	0.7
Window Sashes	Wood	Dark Green painted	P-202-Ex	0.7
			P-205-Ex	160
			P-204-Ex	180
Ceiling of North central roof over steps	Wood	White painted	P-166-Ex	5.7
			P-167-Ex	4.5
			P-168-Ex	1
Roof Edge Trim/Soffits	Wood	White/gray painted	P-190-Ex	1.1
			P-191-Ex	1
			P-192-Ex	1.7
Southwest Loading Ramp	Concrete	Gray painted	P-184-Ex	7500
			P-185-Ex	7700
			P-186-Ex	9600
Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White painted	P-187-Ex	33
			P-188-Ex	210
			P-189-Ex	360
Window Sashes	Wood	Dark Green painted	P-FD-009	0.48
Window Frames	Wood	White painted	P-FD-010	0.56
Exterior; North side roofline intersection (sloping portion) between east and west portions of building, at top of metal flashing and in joint between roof and wall	--	White Caulk #2	P-275-Ex	5.9
			P-276-Ex	17
			P-277-Ex	10
Exterior; Small roof over southwest loading ramp roofline intersection with brick wall, at top of metal flashing	--	Flashing Caulk (#3)	P-278-Ex	1.4
			P-279-Ex	1.6
			P-280-Ex	ND
Exterior: Roof - chimney	--	Caulk	P-281-Ex	ND
			P-282-Ex	0.8
			P-283-Ex	ND
Exterior - East concrete window sills under green painted sashes	Concrete	Not painted	P-299-Ex	ND
			P-300-Ex	ND
Exterior - North concrete window sills under green painted sashes	Concrete	Not painted	P-301-Ex	ND
			P-302-Ex	ND
			P-303-Ex	ND
			P-304-Ex	ND
Exterior - South concrete window sills under green painted sashes	Concrete	Not painted	P-332-Ex	ND
			P-333-Ex	ND
			P-334-Ex	ND
Exterior	Soil	--	P-305-Ex-000.5	ND
Exterior	Soil	--	P-306-Ex-000.5	ND
Exterior	Soil	--	P-307-Ex-000.5	ND
Exterior	Soil	--	P-308-Ex-000.5	0.22
Exterior	Soil	--	P-308-Ex-0.501	ND
Exterior	Soil	--	P-309-Ex-000.5	ND
Exterior	Soil	--	P-310-Ex-000.5	ND
Exterior	Soil	--	P-311-Ex-000.5	ND
Exterior	Soil	--	P-312-Ex-000.5	ND
Exterior	Soil	--	P-313-Ex-000.5	0.13
Exterior	Soil	--	P-313-Ex-0.501	0.15
Exterior	Soil	--	P-313-Ex-0101.5	ND
Exterior	Soil	--	P-314-Ex-000.5	0.29
Exterior	Soil	--	P-314-Ex-0.501	0.1
Exterior	Soil	--	P-315-Ex-000.5	4.4
Exterior	Soil	--	P-315-Ex-0.501	1.3
Exterior	Soil	--	P-315-Ex-0101.5	0.097
Exterior	Soil	--	P-316-Ex-000.5	0.32
Exterior	Soil	--	P-316-Ex-0.501	0.11
Exterior	Soil	--	P-317-Ex-000.5	ND
Exterior	Soil	--	P-318-Ex-000.5	ND
Exterior	Soil	--	P-319-Ex-000.5	ND
Exterior	Soil	--	P-320-Ex-000.5	ND
Exterior	Soil	--	P-321-Ex-000.5	0.36
Exterior	Soil	--	P-321-Ex-0.501	0.2
Exterior	Soil	--	P-322-Ex-000.5	ND
Exterior	Soil	--	P-323-Ex-000.5	0.52
Exterior	Soil	--	P-323-Ex-0.501	0.23
Exterior	Soil	--	P-324-Ex-000.5	ND
Exterior	Soil	--	P-325-Ex-000.5	ND
Exterior	Soil	--	P-326-Ex-000.5	0.17
Exterior	Soil	--	P-326-Ex-0.501	ND
Exterior	Soil	--	P-327-Ex-000.5	ND
Exterior	Soil	--	P-328-Ex-0606.5	ND



HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Sampled Material	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
North Side	Exterior	Window Caulking	White (Newer)	2A	1.5	-
North Side				2B	ND	-
Unknown				PCB-2C	ND	-
North Side	Exterior	Window Glazing Compound	White	3A	ND	-
North Side				3B	ND	-
Unknown				PCB-3C	0.87	-
North Side	Exterior	Window Caulking	Older	4A	26	-
North Side				4B	3.5	-
Unknown				PCB-4C	0.81	-
North Side	Exterior	Door Caulking	Grey	1A	12	-
				1B	14	-
"Garage" Roof (i.e. Loading Dock)	Exterior	"Flashing"	Silver Color	6A	ND	-
				6B	ND	-
				PCB-6C	ND	-
Under Roof Edge, North Side	Exterior	Tar Brick Caulking	Black	5A	ND	-
				5B	ND	-
				PCB-5C	ND	-
West Edge of Eastern Wing at Gambrel Flashing	Exterior	Roof Caulking	Black	9A	ND	-
				9B	ND	-
				PCB-9C	ND	-

TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-5DC (note-hotatoric sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-16D (note-hotatoric sample location unknown, sample grey floor paint)	
	Interior	1st floor	15	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R10S	
	Interior	2nd Floor	6	West	Wood	Brown	P-023-R06F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-186-Ex (Note-sample white painted wood base)	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Drk. Gray	P-051-R10BNC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon Brown	P-048-R18E	
	Interior	Basement	29	West	Brick	Lt. Green	P-064-R20W	
	Interior	Basement	29	North	Concrete	Beige/Drk. Grey	P-004-R20NC	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-068-R21EB	28
	Interior	Basement	21	West	Brick	Black/Lt. Green	P-064-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-ETLR23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-068-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-088-R22SPW	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green - high	P-263-R17EC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-231-R28S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-190-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell B-1	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-231-R15CP	
	Interior	2nd Floor	5	Behind wall panneling in Room 5	Gray adhesive associated with brown, faux wood wall panning	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-022a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants Workplan for Additional Hazardous Building Materials Sampling , 2023
mg/L = milligrams per liter

TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
01162415979.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
01162415979.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
'-' - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower initial volume used for analysis.

LEGEND

AUGUST 14 - DECEMBER 3, 2023 SAMPLING EVENT

- P-046-R10S — SAMPLE LOCATION TOTAL PCB'S X<1 mg/kg
- P-046-R10S — SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg
- P-046-R10S — SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

HISTORIC SAMPLING EVENTS

- 9A — SAMPLE LOCATION TOTAL PCB'S <1 mg/kg
- 1A — SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg
- 2A — SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

JANUARY 16, 2023 PCB SAMPLING EVENT

- 0116241597.801 — SAMPLE LOCATION FOR TCLP PCB'S

5 0 2.5 5 10 20
1 INCH = 5 FT

NOTES:

1. BASE MAP TAKEN FROM ST. J. ARMORY DD SET DATED 5-13-22 BY DUFRESNE GROUP AND WIEMANN LAMPHERE ARCHITECTS.
2. HISTORIC SAMPLE INFORMATION OBTAINED FROM " WORK PLAN FOR ADDITIONAL HAZARDOUS BUILDING MATERIALS SAMPLING", ATLAS TECHNICAL CONSULTANTS, REVISED MARCH 20, 2023.
3. PCB SAMPLE RESULTS FROM AUGUST 14-DECEMBER 3, 2023 OBTAINED FROM "DATA SUMMARY TRANSMITTALS, ST. JOHNSBURY ARMORY-TARGETED BROWNFIELDS ASSESSMENT, PREPARED FOR EPA REGION 1, EPA CONTRACT NO 68HE0122R0005, SITE NO 68HE0122F0044-13, KGSNEJV II, LLC, DECEMBER 12, 2023"
4. ALL LOCATIONS SHOWN ARE APPROXIMATE.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

EXTERIOR PCB SAMPLE LOCATIONS

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
500 HORIZON DRIVE, SUITE 540
ROBBINSVILLE, NEW JERSEY 08691
T: 609.890.7277 montrose-env.com

Scale:	1" = 10'
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/15/24
Sheet No.:	6 OF 17
Revision Number:	0

FIGURE 3D

O:\projects\Town of St. Johnsbury-13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\Plan Set.dwg

TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
011624159798.001	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159798.002	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
011624159798.003	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159798.004	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159798.005	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159798.006	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159798.007	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624159798.008	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
'--' Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower initial volume used for analysis

PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

Room	Direction	Substrate	Color	Sample ID	Total PCBs (ppm)
3	East	Plaster/Lath	Beige/Brown	P-003-R03E	32
	South	Plaster/Lath	Beige/Brown/Pink	P-002-R03S	46
	West	Plaster/Lath	Beige/Yellow/ Salmon/Brown	P-003-R03W	43
	Ceiling	Plaster/Lath	White	P-004-R03C	29
	Wood Trim	Wood Trim	Salmon	P-035-R03W T	38
	Door		Blue	P-006-R03D	41
	West	Plaster/Lath	Beige/Yellow/ Salmon/Brown	P-FD-012	41
4	East	Plaster/Lath	Beige/Salmon	P-007-R04E	23
	South	Plaster/Lath	Beige/Salmon	P-008-R04S	17
	West	Plaster/Lath	Beige/Salmon/Maroon	P-009-R04W	24
	Wood Trim		Drk. Beige	P-010-R04WT	51
	Door		Drk. Beige	P-011-R04D	70
	West	Plaster/Lath	Beige/Salmon/Maroon	P-FD-013	23
5	East	Plaster/Lath	Lt. Biege	P-012-R05E	18
	South	Plaster/Lath	Light Blue	P-013-R05S	31
	West	Plaster/Lath	Lt. Beige	P-014-R05W	22
	Ceiling	Drop Tiles	White	P-015-R05C	16
	Wood Trim		Lt. Beige	P-017-R05W T	35
	Door		Robin Egg Blue	P-024-R05D	72
	Floor	Hardwood	Brown	P-016-R05F	21
6	East	Plaster/Lath	Drk. Beige/Lt. Green	P-018-R06E	23
	South	Plaster/Lath	Drk. Beige/Lt. Green	P-019-R06S	21
	South	Plaster/Lath	Drk. Beige/Lt. Green	P-019-R06S-MS/MSD	21
	Ceiling	Drywall	White	P-020-R06C	18
	Wood Trim		Robins egg Blue/Orange	P-021-R06W T	38
	Door		White	P-022-R06D	49
	Floor	Hardwood	Brown	P-023-R06F	52
	East	Plaster/Lath	Drk. Beige/Lt. Green	P-FD-01	21
		--	Celotex board - loose panels	P- 284-R6	2.6
				P- 285-R6	2.2
7	East	Plaster/Lath	Drk. Beige	P-025-R07E	22
	South	Plaster/Lath	Drk. Beige	P-026-R07S	14
	Wood Trim		Drk. Beige/Green	P-029-R07W T	35
	Door		Beige	P-037-R07D	19
	Ceiling	Drywall	White	P-027-R07C	33
	Floor	Hardwood	Brown	P-028-R07F	36
8	East	Plaster/Lath	Yellow/Green	P-030-R08E	20
	South	Plaster/Lath	Yellow	P-031-R08S	16
	West	Plaster/Lath	Yellow	P-032-R08W	11
	Ceiling	Plaster/Lath	White	P-033-R08C	20
	Wood Trim		Red/Maroon	P-035-R08W T	34
	Door		Red/Maroon	P-036-R08D	45
	Floor	Hardwood	Brown	P-034-R08F	51
9	East	Plaster/Lath	Blue/White	P-044-R09E	50
	South	Plaster/Lath	Yellow/Lt. Blue	P-039-R09S	17
	West	Plaster/Lath	Lt. Beige/Blue	P-040-R09W	16
	Ceiling	Plaster/Lath	White	P-041-R09C	14
	Wood Trim		Blue	P-043-R09W T	27
	Door		Blue	P-044-R09D	31
	Floor	Hardwood	Brown	P-042-R09F	56
	West	Plaster/Lath	Lt. Beige/Blue	P-FD-02	19
10	East	Plaster/Lath	White	P-045-R10E	13
	South	Plaster/Lath	White	P-046-R10S	21
	West	Plaster/Lath	White	P-047-R10W	19
	Wood Trim		White	P-156-R10WT	38
		--	Celotex board - walls of closet	P-286-R10	1.6

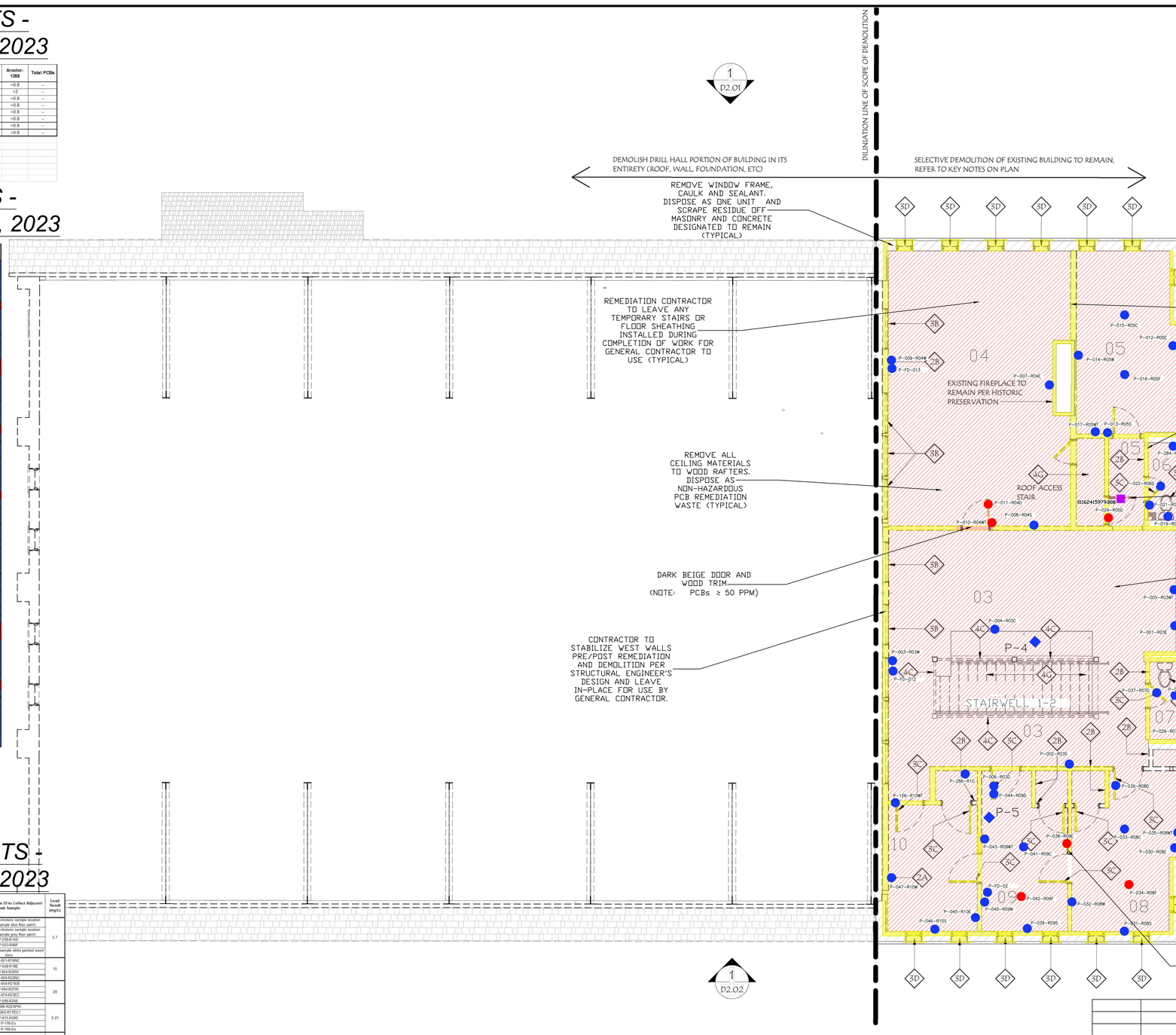
TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Sub Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-26C (note-historic sample location unknown, sample blue floor paint)	0.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-16C (note-historic sample location unknown, sample gray floor paint)	
	Interior	1st floor	10	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R10S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-023-R06F	
	Exterior	N/A	N/A	Southeast Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-158-Ex (Note-sample white painted wood trim)	
WC-Lead-Comp 2	Interior	Basement	19	North	Sheet Metal walls	White/Green/Drk. Grey	P-051-R19NC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	
	Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	
	Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-054-R20NC	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Paint:Lt. Green/Brown	P-054-R21EB	28
	Interior	Basement	21	West	Brick	Blue/Lt. Green	P-054-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green Mansion	P-088-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-080-R22SPW	0.21
	Interior	1st floor	Gym	East	Celotex	Lt Green - high	P-263-R1TEC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-031-R08S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-150-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell 0-1	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	10	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-S10CP	
	Interior	2nd Floor	5	Behind wall pannneling in Room 5	Gray adhesive associated with brown, faux wood wall panneling	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	Silver paint associated with metal roofing	Tin	Silver	A-022a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling* , 2023
mg/L = milligrams per liter

HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Sampled Material	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
4	Interior	Tar sealant?	Black tar	P-2	ND	Unknown
3	Interior	Wall Paint	Light pink	P-4	45	-
9	Interior	Wall Paint	Light blue	P-5	22	-



DEMOLITION KEY SCHEDULE

KEY	DESCRIPTION
2A	DEMO EXTERIOR BRICK MASONRY WALL
2B	DEMO INTERIOR WALL PARTITION. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
2C	DEMO SITE WALL TO EXTENT SHOWN ON PLAN
2D	DEMO INTERIOR MASONRY WALL TO EXTENT SHOWN. INSTALL NEW STEEL LINTEL AT OPENING HEAD. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
5A	DEMO EXTERIOR DOOR AND FRAME
5B	DEMO EXTERIOR WINDOW AND FRAME
5C	DEMO INTERIOR DOOR AND FRAME
5D	DEMO EXTERIOR WINDOW AND PREP FOR WINDOW REPLACEMENT
4A	REMOVE EXTERIOR CONCRETE STAIR AND RAILINGS
4B	REMOVE MILLWORK COUNTER
4C	REMOVE EXISTING WOOD RAILING
4D	REMOVE EXISTING SHED ROOF AND ALL SUPPORTS
4E	DEMO EXISTING CONCRETE RAMP
4F	REMOVE EXISTING TOILET PARTITIONS. PATCH AND REPAIR WALL / FLOOR ATTACHEMENT
4G	REMOVE EXISTING WOOD STAIR AND RAILINGS.
5A	REMOVE SINK, CAP PLUMBING IN WALL, COVER WITH S.S. PLATE
5B	REMOVE WALL HUNG URINAL, CAP PLUMBING BEHIND WALL, CAP WITH S.S. PLATE
5C	REMOVE FLOOR MOUNT TOILET

GENERAL DEMOLITION NOTES

1. ALL WALL AND DOOR FRAMING THAT IS EXISTING TO REMAIN WILL NEED TO HAVE HEADERS AND SILL PLATES REFRAMED TO COORDINATE WITH THE NEW CONCRETE SLAB.

LEGEND

PCBs ≥ 50.0 PPM (REMOVE PAINT WITH SUBSTRATE, DISPOSE AS PCB BULK PRODUCT WASTE)

PCBs ≥ 1.0 PPM AND <50.0 PPM (REMOVE PAINT WITH SUBSTRATE, DISPOSE AS NON-HAZARDOUS PCB REMEDIATION WASTE)

03 ROOM ID

AUGUST 14 - DECEMBER 3, 2023 SAMPLING EVENT

P-046-R10S SAMPLE LOCATION TOTAL PCB'S X<1 mg/kg

P-046-R10S SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg

P-046-R10S SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

P-5 HISTORIC PCB SAMPLING EVENT
SAMPLE LOCATION TOTAL PCB'S <1 mg/kg

P-4 SAMPLE LOCATION TOTAL PCB'S 1<X<50 mg/kg

P-5 SAMPLE LOCATION TOTAL PCB'S X>50 mg/kg

JANUARY 16, 2023 PCB SAMPLING EVENT

01624159798.001 SAMPLE LOCATION FOR TCLP PCB'S

1 FLOOR PLAN - SECOND FLOOR
(1 D1.03) 3/16" = 1'-0"

NOTES
1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION PLAN - LEVEL 2 D1.03 DATED 12/1/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. CONTRACTOR SHALL SCRAPE ALL LOOSE AND PEALING PAINT FROM ALL SURFACES AND SHOP VAC FLOOR PRIOR TO STARTING REMEDIATION ON A RESPECTIVE FLOOR.
4. CONTRACTOR SHALL WET A RESPECTIVE AREA PRIOR TO REMOVAL TO MINIMIZE DUST.
5. CONTRACTOR TO REMOVE AND DISPOSE OF ALL UNIVERSAL WASTES AS PART OF WORK.
6. CONTRACTOR TO REMOVE ANY VISIBLE PAINT VIA DRY-ICE BLASTING (OR APPROVED EQUAL) FROM ANY CONCRETE OR MASONRY WALLS DESIGNATED TO REMAIN AND APPLY TWO COATS OF ENCAPSULANT.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

PCB REMEDIATION PLAN-SECOND FLOOR (LEVEL 2)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	7 OF 17
Revision Number:	0

FIGURE 4A

O:\projects\Town of St. Johnsbury_13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 3 - St - Public Safety_D1-03 - DEMOLITION PLAN - LEVEL 2 (12-04-2023).dwg

TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Room Classification Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead, by wt (mg/L)
W-C-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	P-CB-26C (side-indicator; sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Gray	P-CB-19C (side-indicator; sample location unknown, sample gray floor paint)	
	Interior	1st floor	15	Stath	Plaster/Lath	Pink, Green, White, Brown	P-224-W	
	Interior	2nd Floor	6	Stath	Brick	Brown	P-225-W	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-168-Ex (Note-sample white painted wood trim)	
W-C-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Oth. Grey	P-001-R18NC	15
	Interior	Basement	9-1	East	Brick	Lt. Blue/Fulvous/ Brown	P-1969-RE	
	Interior	Basement	20	West	Brick	Lt. Green	P-954-R20W	
	Interior	Basement	20	North	Concrete	Beige/Oat. Gray	P-956-R20NC	
W-C-Lead-Comp 3	Interior	Basement	21	East	Brick	Fire(s), Green/Brown	P-958-R21EB	28	
	Interior	Basement	21	West	Brick	Blue(s), Green	P-964-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Oth. Green	P-974-R23EC	
	Interior	Basement	25	East	Brick	White Lt. Green Stained	P-965-R25E	
W-C-Lead-Comp 4	Interior	Basement	22	Stath	Painted Pl/wood	Yellow/Oth. Blue	P-965-R22SPW	0.21
	Interior	1st floor	Gym	East	Ceiling	Lt Green - high	P-1001-R1ECT	
	Interior	1st floor	1	East	Plaster/Lath	White/Green	P-1001-R1E	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-179-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffit	Wood	White/Grey	P-180-Ex	
W-C-Lead-Comp 5	Interior	Basement	Stairwell 1-2		Ceiling	Drywall	White	P-965-S12C	0.83
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Stained wall panneling in Room 5	Grip adhesive associated with brown, faux wood wall panneling	Gray	A-008a/A5	
	Exterior	N/A	Roof	Chimney	Light grip, horizontal main (#5)	Light grip	P-281-Ex	
	Exterior	N/A	Roof	silver paint associated with metal siding	Tie	Silver	A-402a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants Workplan for Additional Hazardous Building Materials Sampling, 2023
mg/L = milligrams per litre

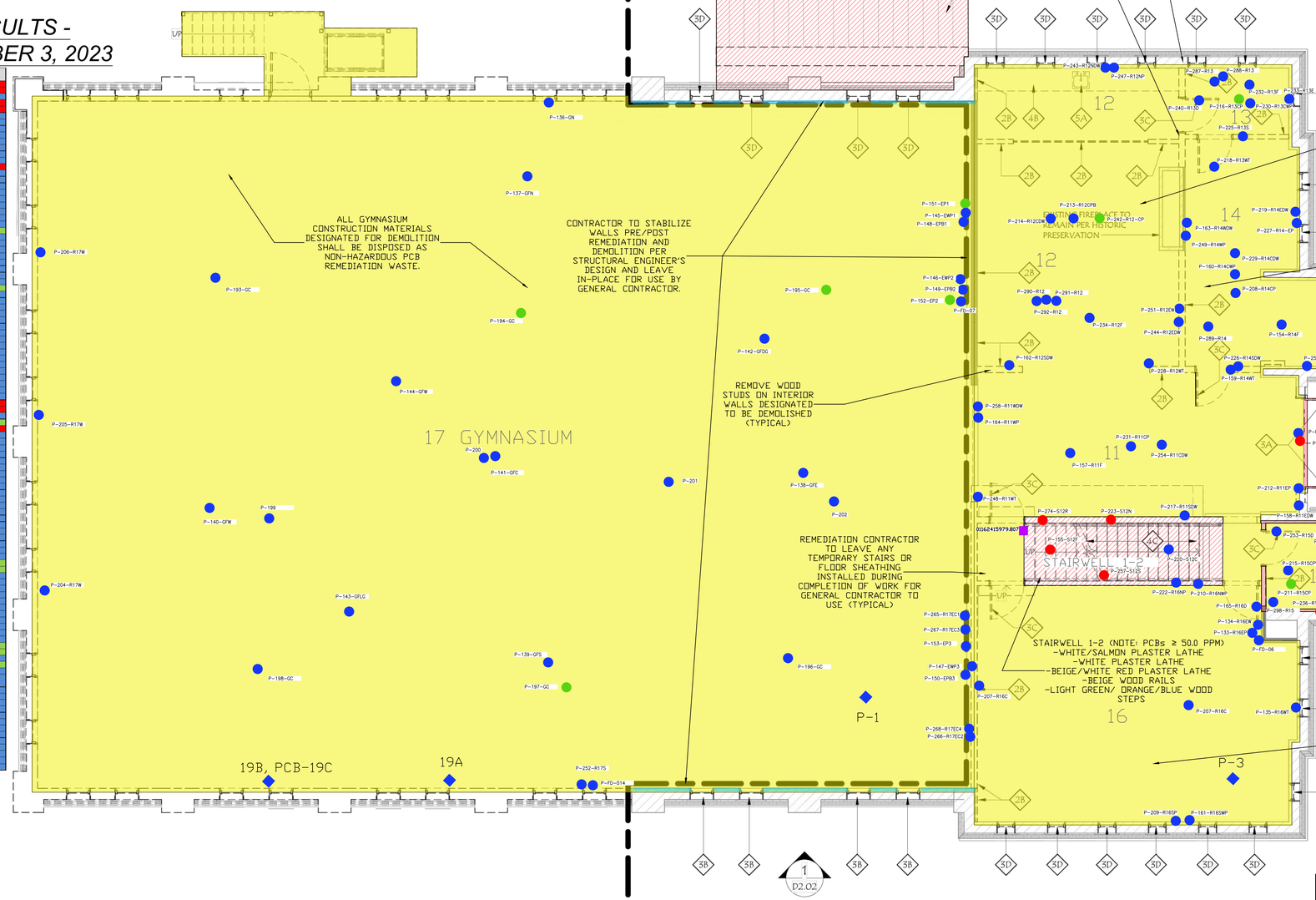
TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
011624150979.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624150979.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
011624150979.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624150979.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624150979.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624150979.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624150979.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011624150979.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
"U" - indicates that the Total PCBs result for a given sample were non-detect
"-(number)" - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower initial volume used for analysis.

PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

Room	Direction	Substrate	Color	Sample ID	Total PCBs (ppm)
Stairwell 1-2	South	Plaster/Lath	White/Salmon	P-223-S12C	1.1
	North	Plaster/Lath	White	P-224-S12C	1.1
	Ceiling	Plaster/Lath	Beige/White/Red	P-226-S12C	69
	Wood Rails		Beige	P-178-S12	1.1
	Floor	Wood Steps	Lt. Green/Orange/Blue	P-227-S12	2.2
11	East	Drywall over	Beige/White	P-208-R11EDW	3.7
	East	Plaster/Lath	White/Orange/Lt. Green	P-232-R11EP	16
	South	Drywall over	Salmon	P-207-R11SDW	8.7
	West	Drywall over	Salmon	P-218-R11WDW	15
	West	Plaster/Lath	White	P-164-R11WP	20
	Ceiling	Drywall over	White	P-254-R11CDW	7.1
	Ceiling	Plaster/Lath	White	P-251-R11CP	1.7
	Wood Trim		Drk. Green/Beige/Blue	P-248-R11WT	1.1
	Door		White/Beige/Blue	P-157-R11F	15
	Floor	Hardwood	Brown	P-157-R11F	1.1
12	East	Drywall over	Beige/White	P-218-R12EDW	1.1
	East	Plaster/Lath	Beige/Blue	P-215-R12EW	16
	South	Drywall over	Lt. Yellow	P-160-R12SDW	8.8
	North	Drywall over	White	P-240-R12NDW	8.6
	North	Plaster/Lath	White	P-247-R12NP	2.4
	Ceiling	Drywall	White	P-214-R12CDW	2.1
	Ceiling	Particle board	White	P-213-R12CPB	1.1
	Ceiling	Plaster/Lath	White	P-242-R12-CP	0.68
	Wood Trim		Green/Blue	P-228-R12WT	26
	Floor	Hardwood	Brown	P-241-R12F	1.1
		Carpet remnant fibers on wood floor	–	P-290-R12	3.3
				P-291-R12	2.7
				P-292-R12	3.4
13	East	Plaster/Lath	Drk. Green/Lt. Green	P-233-R13E	8.1
	South	Plaster/Lath	Lt. Green/Drk. Green	P-223-R13S	4.1
	Ceiling	Wood Panel	White	P-226-R13CW	4.2
	Ceiling	Plaster/Lath	White	P-224-R13CP	0.33
	Wood Trim		Dark Blue	P-218-R13WT	11
	Door		White Beige	P-146-R13D	21
	Floor	Hardwood	Brown	P-215-R13F	27
		Mastic on Wood Floor	Beige	P-287-R13	4.3
				P-288-R13	2.2
14	East	Drywall	Beige	P-209-R14EDW	4.8
	East	Plaster/Lath	White	P-227-R14EP	4.8
	South	Drywall	Salmon	P-228-R14SDW	12
	South	Plaster/Lath	White	P-251-R14SP	3.3
	West	Drywall	Beige/Yellow	P-241-R14WDW	1.8
	West	Plaster/Lath	Pink	P-168-R14WP	1.1
	Ceiling	Drywall	White	P-219-R14CDW	8.9
	Ceiling	Drop Ceiling Wood Panel	White	P-160-R14CWP	8.1
	Ceiling	Plaster/Lath	White	P-208-R14CP	1.4
	Wood Trim		Green/Blue	P-159-R14WT	20
	Door	Hardwood	Brown/Yellow	P-154-R14F	12
		Mastic on Wood Floor	Beige	P-289-R14	11
15	East	Plaster/Lath	Pink, Green, White, Brown	P-229-R15E	56
	South	Plaster/Lath	Pink, Green, White, Brown	P-226-R15S	28
	Ceiling	Plywood panel	Beige/Pink/Brown	P-255-R15CPW	21
	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-253-R15CP	0.56
	Wood Trim		Lt. Brown/Blue/White	P-221-R15WT	11
	Door		Drk. Green/White	P-223-R15D	33
				P-296-R15	7.6
				P-297-R15	33
				P-298-R15	10
16	East	Wood Panel	White	P-158-R11EDW	23
	East	Plaster/Lath	Lt. Green/Drk. Green	P-159-R11EP	5.5
	South	Wood Panel	White	P-161-R11SWP	33
	South	Plaster/Lath	Green	P-209-R11SP	4.4
	North	Wood Panel	Green/White	P-210-R11NWP	28
	North	Plaster/Lath	White	P-212-R11EP	18
	Ceiling	Plaster/Lath	White	P-257-R11C	16
	Wood Trim		Drk. Green	P-158-R11WT	35
	Door			P-161-R11D	34
	East	Plaster/Lath	Lt. Green/Drk. Green	P-253-R	1.8
Gym	East	Wood panelling	White	P-161-E1P1	7.4
			White	P-168-E1P2	1.8
			White/Green	P-167-E1P3	3.8
		Particle Board	Green	P-148-DP1	9.1
			Green	P-148-DP61	4.7
			Green	P-126-DP61	10
		Plaster/Lath	White	P-111-EP1	0.55
			White	P-151-EP2	0.42
			White	P-233-EP3	1.2
		Cellotex		P-261-E1EC1	4.1
				P-268-E1EC2	5.3
				P-267-E1EC3	2.9
				P-268-E1EC4	3.1
	South	Brick	White/Blue	P-122-S17S	13
	West	Brick	White/Yellow	P-264-S17W	4.8
				P-263-S17W	8.1
				P-266-S17W	10
	North	Brick	White/Yellow/Green	P-134-GN	8.1
	Ceiling	Particle board/plywood	White/Beige	P-264-GC	0.8
				P-261-GC	0.66
				P-265-GC	0.83
				P-266-GC	1.1
				P-267-GC	0.57
				P-268-GC	1.1
	Metal Girders		White	P-199	7.8
				P-200	4.8
				P-201	7.8
				P-202	8.1
	Floor	Hardwood/polyurethane	Brown	P-137-GFS	3
			Brown	P-138-GFE	1.8
			Brown	P-139-GFS	7.1
			Brown	P-140-GFW	4.1
			Brown	P-141-GFC	7.9
	Floor	Hardwood/Dk green	Dk. Green	P-142-GFDG	3.7
	Floor	Hardwood/Lt green	Lt. Green	P-143-GFLG	13
	Floor	Hardwood/White	White	P-144-GFW	3.9
	South	Brick	White/Blue	P-FD-014	8.1
	East	Wood Paneling	White	P-252-R17S	4.9



1 DEMOLITION PLAN - LEVEL 1
D1.02 3/16" = 1'-0"

GENERAL DEMOLITION NOTES

1. ALL WALL AND DOOR FRAMING THAT IS EXISTING TO REMAIN WILL NEED TO HAVE HEADERS AND SILL PLATES REFRAMED TO COORDINATE WITH THE NEW CONCRETE SLAB.

DEMOLITION KEY SCHEDULE

KEY	DESCRIPTION
2A	DEMO EXTERIOR BRICK MASONRY WALL
2B	DEMO INTERIOR WALL PARTITION. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
2C	DEMO SITE WALL TO EXTENT SHOWN ON PLAN
2D	DEMO INTERIOR MASONRY WALL TO EXTENT SHOWN. INSTALL NEW STEEL LINTEL AT OPENING HEAD. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
3A	DEMO EXTERIOR DOOR AND FRAME
3B	DEMO EXTERIOR WINDOW AND FRAME
3C	DEMO INTERIOR DOOR AND FRAME
3D	DEMO EXTERIOR WINDOW AND PREP FOR WINDOW REPLACEMENT
4A	REMOVE EXTERIOR CONCRETE STAIR AND RAILINGS
4B	REMOVE MILLWORK COUNTER
4C	REMOVE EXISTING WOOD RAILING
4D	REMOVE EXISTING SHED ROOF AND ALL SUPPORTS
4E	DEMO EXISTING CONCRETE RAMP
4F	REMOVE EXISTING TOILET PARTITIONS. PATCH AND REPAIR WALL / FLOOR ATTACHEMENT
4G	REMOVE EXISTING WOOD STAIR AND RAILINGS.
5A	REMOVE SINK, CAP PLUMBING IN WALL, COVER WITH S.S. PLATE
5B	REMOVE WALL HUNG URINAL, CAP PLUMBING BEHIND WALL, CAP WITH S.S. PLATE
5C	REMOVE FLOOR MOUNT TOILET

HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Sampled Material	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
Gym / 17, South Side	Interior	Wall Paint	White	19A	7.4	-
	Interior			19B	7.4	-
	Interior			PCB-19C	9	-
Gym / 17	Interior	Paper Under Flooring	Unknown	P-1	4.4	-
16	Interior	Paper Under Flooring	Unknown	P-3	7.8	-

NOTES
1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION PLAN - LEVEL 1 D1.02 DATED 12/1/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. CONTRACTOR SHALL SCRAPE ALL LOOSE AND PEALING PAINT FROM ALL SURFACES AND SHOP VAC FLOOR PRIOR TO STARTING REMEDIATION ON A RESPECTIVE FLOOR.
4. CONTRACTOR SHALL WET A RESPECTIVE AREA PRIOR TO REMOVAL TO MINIMIZE DUST.
5. CONTRACTOR TO REMOVE AND DISPOSE OF ALL UNIVERSAL WASTES AS PART OF WORK.
6. CONTRACTOR TO REMOVE ANY VISIBLE PAINT VIA DRY-ICE BLASTING (OR APPROVED EQUAL) FROM ANY CONCRETE OR MASONRY WALLS DESIGNATED TO REMAIN AND APPLY TWO COATS OF ENCAPSULANT.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

PCB REMEDIATION PLAN - FIRST FLOOR (LEVEL 1)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	8 OF 17
Revision Number:	0

FIGURE 4B

O:\projects\Town of St. Johnsbury\13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 4 St- J Public Safety_D1.02 - DEMOLITION PLAN - LEVEL 1 (12-04-2023).dwg

PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3, 2023

Room	Direction	Substrate	Color	Sample ID	Total PCBs (ppm)
Stairwell 0-1	South	Plaster/Lath	Beige/Green/Brown	P-062-S01S	31
	West	Plaster/Lath	Beige/Green/Brown	P-063-S01W	40
	North	Plaster/Lath	Beige/Brown	P-066-S01N	42
	Ceiling	Drywall	White	P-066-S01C	0.33
	Wood Rails		Drk. Green	P-065-S01R	91
	Door	Wood Steps	White/Drk. Green	P-067-S01D	54
	Floor		White/Drk. Green/ Black/Brown/ Lt. Blue	P-229-S01F	139
18	East	Brick	Lt. Blue/Salmon/ Brown	P-060-R18E	180
	South	Brick	Lt. Blue/ White	P-060-R18S	370
	North	Concrete	White/Green/Drk. Grey	P-055-R18NC	290
		Brick	White/Beige	P-055-R18NB	120
	Ceiling	Pressed tin	Drk. Beige/Black	P-052-R18C	19
		Mastic on underside of VFT	Black	P-233-R18	3700
				P-294-R18	4000
				P-295-R18	6800
20	East	Brick	White/Dark Grey	P-053-R20E	4000
	West	Brick	Lt. Green	P-051-R20W	7000
	North	Concrete	Beige/Drk. Grey	P-056-R20NC	6000
		Brick	Lt. Green	P-055-R20NB	1000
21	East	Concrete	Lt. Blue/ Brown	P-057-R21EC	36
		Brick	Pink/Lt. Green/Brown	P-059-R21EB	92
	South	Brick	White/Lt. Blue	P-058-R21S	200
	West	Brick	Blue/Lt. Green	P-054-R21W	91
	Ceiling	Drywall over ??	White	P-060-R21C	25
	Door		Lt. Blue/White/ Green/Orange/yellow	P-061-R21D	92
	Floor	Beige Painted Concrete	Grey/Beige	P-095-R21FN	23
	Floor	Beige Painted Concrete	Grey/Beige	P-096-R21FS	26
22	East	Painted Drywall	Yellow/White	P-069-R22EW	92
	East	Concrete Foundation	Brown	P-069-R22EC	600
	South	Printed Plywood	Yellow/Drk. Blue	P-085-R22SPW	28
	South	Brick	Lt. Blue	P-073-R22S	180
	West	Painted Plywood	White	P-070-R22WPW	23
	West	Brick	Lt. Blue	P-071-R22WB	280
	Ceiling	2x4 wood	White	P-071-R22C	47
	Door		White	P-072-R22D	240
23	East	Concrete	Salmon/Drk. Green	P-075-R23EC	190
		Brick	Salmon/Lt. Green/White	P-075-R23EB	68
	West	Brick	Salmon/Lt. Green	P-077-R23W	120
	North	Brick	Salmon	P-079-R23N	130
	Ceiling	Pressed tin over lath	White	P-224-R23C	300
	Wood Trim		Drk. Green/White	P-076-R23WT	92
	Door		White/Drk. Blue	P-078-R23D	74
24	East	Brick	Salmon/White/Lt. Green	P-083-R24E	120
	South	Concrete	Beige/ Lt. Green	P-081-R24SC	130
		Brick	Beige/ Lt. Green	P-082-R24SB	130
	West	Brick	White/Lt. Green	P-081-R24W	120
	Door		White/Beige	P-080-R24D	60
24A	South	Painted plywood	White/Beige	P-097-R24AS	62
	West	Brick	White/Lt. Green	P-096-R24AW	200
	North	Brick	Beige/ Lt. Green	P-099-R24AN	130
	Ceiling	Drywall over ??		P-100-R24AC	120
25	East	Brick	White/ Lt. Green/ Maroon	P-088-R25E	200
	South	Brick		P-087-R25S	90
	Ceiling	Drywall	Beige	P-089-R25CDW	66
	Ceiling	Plaster/Lath	Beige	P-090-R25CP	18
	Door		Drk. Blue	P-254-R25D	19
25A	East	Brick	Lt. Green	P-090-R25AE	120
	South	Brick	Lt. Green	P-091-R25AS	180
	Ceiling	Drywall	Beige	P-093-R25ACDW	27
	Ceiling	Plaster/Lath	Beige	P-091-R25ACP	30
26	East	Brick	White	P-101-R26E	41
	South	Concrete	White	P-102-R26SC	30
		Brick	White	P-103-R26SB	36
	North	CMU	White	P-104-R26N	42
	Ceiling	Drywall over lath	White	P-105-R26C	7.9
27	South	CMU	White	P-106-R 275	42
	North	CMU	White/Pink	P-107-R27NC	42
	North	Brick	White	P-108-R27NB	30
27A	East	Brick	Lt. Green/Red/White	P-109-R27AE	12
	West	CMU	White	P-110-R27AW	23
28	South	Concrete	White	P-111-R28SC	19
		Brick	White	P-112-R28SB	11
	West	Concrete	Lt. Green/Pink/Lt. Blue	P-113-R28WC	29
		Brick	Lt. Green/Lt. Pink	P-114-R28WB	16
	Door		White/Lt. Green	P-115-R28D	21
29	West	Concrete		P-116-29WC	60
		Brick		P-117-29WB	17
	North	Concrete		P-118-29NC	60
		Brick	Lt. Green/Yellow	P-119-29NB	72
30	East	Brick	Lt. Green/White	P-120-R30E	170
	North	Concrete	Lt.Green/White	P-121-R30NC	130
		Brick	Lt. Green/White	P-122-R30NB	94
	Ceiling	Drywall over lath	White	P-123-R30C	31
31	West	Brick	Drk. Green/White	P-124-R31W	28
	North	Concrete	White	P-125-R31NC	300
		Brick	White	P-126-R33E	60
32	East	Concrete	White	P-127-R33NC	60
		Brick	White	P-237-R33NB	60
	North	Concrete	White	P-128-R33NC	60
		Brick	White	P-129-R33NB	60
33	East	Brick	Lt. Green	P-130-R37E	60
	North	Concrete	Lt. Green/White	P-131-R37S	130
		Brick	Lt. Green	P-237-R37NB	120
34	East	Brick	Lt. Green	P-265-R34E	200
	South	CMU	White	P-261-R34S	52
	Ceiling	Drywall over lath	White	P-128-R34C	43
35	South	Brick	White/Lt. Green	P-245-R35S	220
	West	Brick	White/Lt. Green	P-129-R35W	130
	Ceiling	Pressed tin over lath	White/ Brown	P-238-R35C	110
36	Ceiling	Pressed tin over lath		P-246-R36C	130
37	East	Brick	Lt. Green	P-130-R37E	600
	South	Brick	Lt. Green	P-131-R37S	270
	Ceiling	Pressed tin over lath	White/Brown	P-241-R37C	47
23	N/A	Soil	--	P-269-R23SS	ND
27		Soil	--	P-270-R27SS	ND
25A		Soil	--	P-271-R25ASS	ND
21		Soil	--	P-272-R21SS	ND
31		Soil	--	P-273-R31SS	ND
Stairwell 0-1	Wood Rails		Drk. Green	P-FD-01	7.8
28	South	Brick	White	P-FD-04	353
33	North	Concrete	Lt. Green/White	P-FD-05	140
37	South	Brick	Lt. Green	P-FD-06	209
23	N/A	Soil	--	P-FD-015	ND

TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
01162415979.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
01162415979.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
"-" - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower initial volume used for analysis.

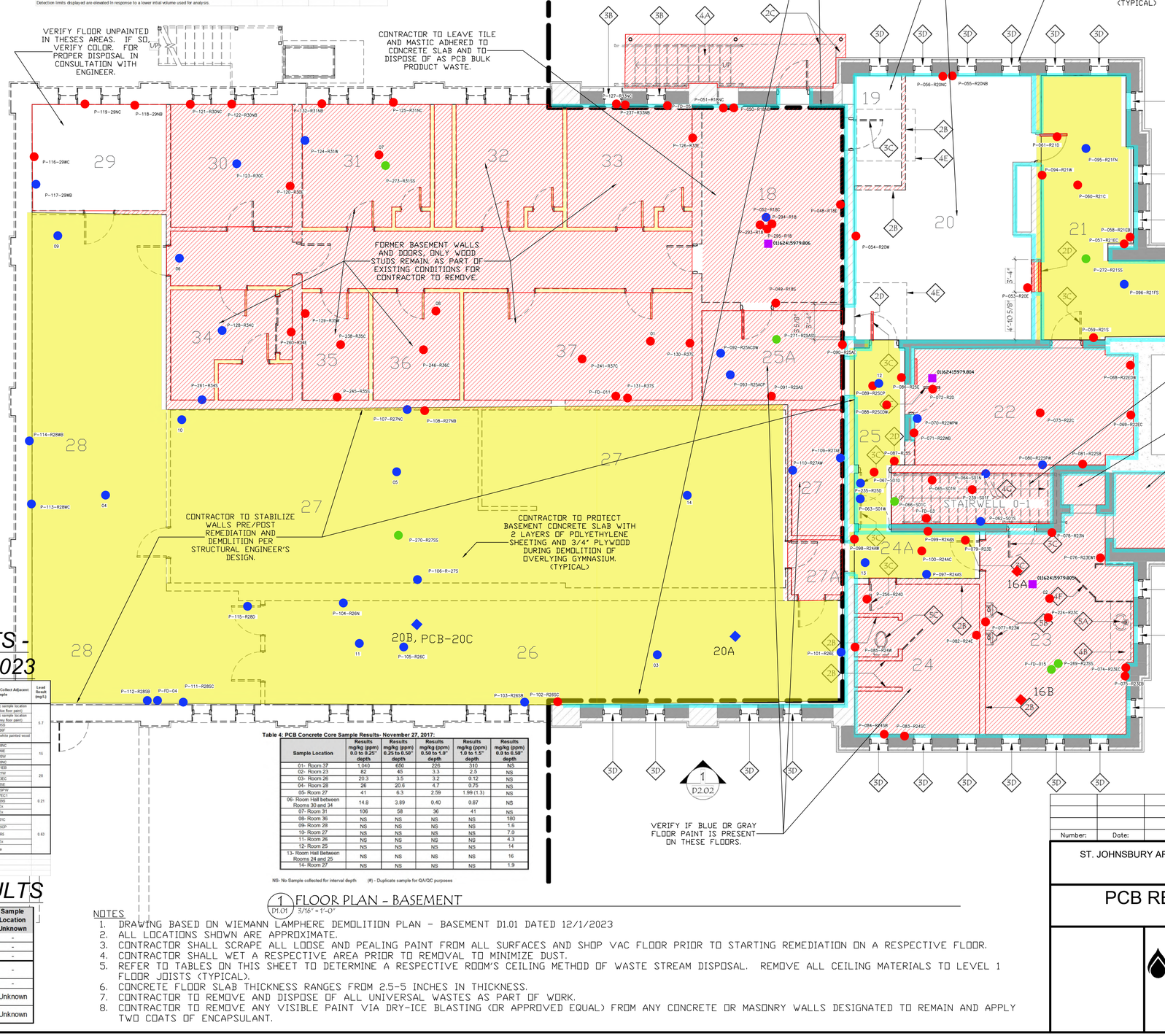
TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-20C (note-historic sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-16D (note-historic sample location unknown, sample grey floor paint)	
	Interior	1st floor	10	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R10S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-223-R06F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-188-Ex (Note-sample white painted wood trim)	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Drk. Grey	P-054-R18NC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	
	Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	
WC-Lead-Comp 3	Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-056-R20NC	29
	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-059-R21EB	
	Interior	Basement	21	West	Brick	Blue/Lt. Green	P-094-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/Lt. Green/ Maroon	P-088-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-085-R22SPW	0.21
	Interior	1st floor	Gym	East	Celotex	Lt Green - high	P-261-R17EC1	
	Interior	2nd Floor	6	South	Plaster/Lath	Yellow	P-031-R06S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-190-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell 0-1	Drywall	Ceiling		P-066-S01C	0.63
	Interior	1st floor	10	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R10CP	
	Interior	2nd Floor	5	Behind wall paneling in Room 5	Gray adhesive associated with brown, faux wood wall paneling	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-023x	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling*, 2023
mg/L = milligrams per liter

HISTORIC PCB SAMPLE RESULTS

Sample Location / Room	Exterior/ Interior	Substrate	Description / Notes	Sample ID	Total PCBs (ppm)	Sample Location Unknown
26	Interior	Floor Paint	Blue	20A	27	-
26	Interior			20B	44	-
Unknown	Interior			PCB-20C	67	-
23	Interior	Floor Paint	Grey	16A	5700	-
23	Interior			16B	4800	-
Unknown	Interior			16C	5700	Unknown
Unknown	Interior			PCB-16D	20000	Unknown



KEY	DESCRIPTION
2A	DEMO EXTERIOR BRICK MASONRY WALL
2B	DEMO INTERIOR WALL PARTITION. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
2C	DEMO SITE WALL TO EXTENT SHOWN ON PLAN
2D	DEMO INTERIOR MASONRY WALL TO EXTENT SHOWN. INSTALL NEW STEEL LINTEL AT OPENING HEAD. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
3A	DEMO EXTERIOR DOOR AND FRAME
3B	DEMO EXTERIOR WINDOW AND FRAME
3C	DEMO INTERIOR DOOR AND FRAME
3D	DEMO EXTERIOR WINDOW AND PREP FOR WINDOW REPLACEMENT
4A	REMOVE EXTERIOR CONCRETE STAIR AND RAILINGS
4B	REMOVE MILLWORK COUNTER
4C	REMOVE EXISTING WOOD RAILING
4D	REMOVE EXISTING SHED ROOF AND ALL SUPPORTS
4E	DEMO EXISTING CONCRETE RAMP
4F	REMOVE EXISTING TOILET PARTITIONS. PATCH AND REPAIR WALL / FLOOR ATTACHEMENT
4G	REMOVE EXISTING WOOD STAIR AND RAILINGS.
5A	REMOVE SINK, CAP PLUMBING IN WALL, COVER WITH S.S. PLATE
5B	REMOVE WALL HUNG URINAL, CAP PLUMBING BEHIND WALL, CAP WITH S.S. PLATE
5C	REMOVE FLOOR MOUNT TOILET

GENERAL DEMOLITION NOTES

1. ALL WALL AND DOOR FRAMING THAT IS EXISTING TO REMAIN WILL NEED TO HAVE HEADERS AND SILL PLATES REFRAMED TO COORDINATE WITH THE NEW CONCRETE SLAB.

Table 4: PCB Concrete Core Sample Results- November 27, 2017:

Sample Location	Results mg/kg (ppm) 0.0 to 0.25" depth	Results mg/kg (ppm) 0.25 to 0.50" depth	Results mg/kg (ppm) 0.50 to 1.0" depth	Results mg/kg (ppm) 1.0 to 1.5" depth	Results mg/kg (ppm) 0.0 to 0.50" depth
01- Room 37	1,040	650	226	310	NS
02- Room 23	82	45	3.3	2.5	NS
03- Room 26	20.3	3.5	3.2	0.12	NS
04- Room 28	26	20.6	4.7	0.75	NS
05- Room 27	41	6.3	2.59	1.99 (1.3)	NS
06- Room Hall between Rooms 30 and 34	14.8	3.89	0.40	0.87	NS
07- Room 31	106	58	36	41	NS
08- Room 36	NS	NS	NS	NS	180
09- Room 28	NS	NS	NS	NS	1.6
10- Room 27	NS	NS	NS	NS	7.9
11- Room 26	NS	NS	NS	NS	4.3
12- Room 25	NS	NS	NS	NS	14
13- Room Hall Between Rooms 24 and 25	NS	NS	NS	NS	16
14- Room 27	NS	NS	NS	NS	1.9

NS- No Sample collected for interval depth (R) - Duplicate sample for QA/QC purposes

1 D1.01 FLOOR PLAN - BASEMENT 3/16" = 1'-0"

NOTES
1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION PLAN - BASEMENT D1.01 DATED 12/1/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. CONTRACTOR SHALL SCRAPE ALL LOOSE AND PEALING PAINT FROM ALL SURFACES AND SHOP VAC FLOOR PRIOR TO STARTING REMEDIATION ON A RESPECTIVE FLOOR.
4. CONTRACTOR SHALL WET A RESPECTIVE AREA PRIOR TO REMOVAL TO MINIMIZE DUST.
5. REFER TO TABLES ON THIS SHEET TO DETERMINE A RESPECTIVE ROOM'S CEILING METHOD OF WASTE STREAM DISPOSAL. REMOVE ALL CEILING MATERIALS TO LEVEL 1 FLOOR JOISTS (TYPICAL).
6. CONCRETE FLOOR SLAB THICKNESS RANGES FROM 2.5-5 INCHES IN THICKNESS.
7. CONTRACTOR TO REMOVE AND DISPOSE OF ALL UNIVERSAL WASTES AS PART OF WORK.
8. CONTRACTOR TO REMOVE ANY VISIBLE PAINT VIA DRY-ICE BLASTING (OR APPROVED EQUAL) FROM ANY CONCRETE OR MASONRY WALLS DESIGNATED TO REMAIN AND APPLY TWO COATS OF ENCAPSULANT.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

PCB REMEDIATION PLAN-BASEMENT (LEVEL 0)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	9 OF 17
Revision Number:	0

FIGURE 4C

O:\projects\Town of St. Johnsbury-13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 5 - S- J Public Safety_D1-01 - DEMOLITION PLAN - BASEMENT (12-04-2023).dwg



NOTES:

1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION ELEVATIONS D2.01 DATED 12/01/2023.
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. CONTRACTOR SHALL SCRAPE ALL LOOSE AND PEALING PAINT FROM ALL SURFACES AND SHOP VAC FLOOR PRIOR TO STARTING REMEDIATION ON A RESPECTIVE FLOOR.
4. CONTRACTOR SHALL WET A RESPECTIVE AREA PRIOR TO REMOVAL TO MINIMIZE DUST.
5. CONTRACTOR TO REMOVE AND DISPOSE OF ALL UNIVERSAL WASTES AS PART OF WORK.
6. CONTRACTOR TO REMOVE ANY VISIBLE PAINT VIA DRY-ICE BLASTING (OR APPROVED EQUAL) FROM ANY CONCRETE OR MASONRY WALLS DESIGNATED TO REMAIN AND APPLY TWO COATS OF ENCAPSULANT.

LEGEND

PCBs ≥ 50.0 PPM (REMOVE PAINT WITH SUBSTRATE, DISPOSE AS PCB BULK PRODUCT WASTE)

PCBs ≥ 1.0 PPM AND <50.0 PPM (REMOVE PAINT WITH SUBSTRATE, DISPOSE AS NON-HAZARDOUS PCB REMEDIATION WASTE)

TCLP PCB SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
011524157979.001	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011524157979.002	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
011524157979.003	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011524157979.004	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011524157979.005	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011524157979.006	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011524157979.007	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
011524157979.008	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L), or parts per million (ppm)
'--' - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated in response to a lower intial volume used for analysis.

DEMOLITION KEY SCHEDULE

KEY	DESCRIPTION
2A	DEMO EXTERIOR BRICK MASONRY WALL
2B	DEMO INTERIOR WALL PARTITION. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
2C	DEMO SITE WALL TO EXTENT SHOWN ON PLAN
2D	DEMO INTERIOR MASONRY WALL TO EXTENT SHOWN. INSTALL NEW STEEL LINTEL AT OPENING HEAD. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
3A	DEMO EXTERIOR DOOR AND FRAME
3B	DEMO EXTERIOR WINDOW AND FRAME
3C	DEMO INTERIOR DOOR AND FRAME
3D	DEMO EXTERIOR WINDOW AND PREP FOR WINDOW REPLACEMENT
4A	REMOVE EXTERIOR CONCRETE STAIR AND RAILINGS
4B	REMOVE MILLWORK COUNTER
4C	REMOVE EXISTING WOOD RAILING
4D	REMOVE EXISTING SHED ROOF AND ALL SUPPORTS
4E	DEMO EXISTING CONCRETE RAMP
4F	REMOVE EXISTING TOILET PARTITIONS. PATCH AND REPAIR WALL / FLOOR ATTACHEMENT
4G	REMOVE EXISTING WOOD STAIR AND RAILINGS.
5A	REMOVE SINK, CAP PLUMBING IN WALL, COVER WITH S.S. PLATE
5B	REMOVE WALL HUNG URINAL, CAP PLUMBING BEHIND WALL, CAP WITH S.S. PLATE
5C	REMOVE FLOOR MOUNT TOILET

TCLP LEAD SAMPLE RESULTS - AUGUST 14 - DECEMBER 3 2023

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp-1	Interior	Basement	26	Floor	Concrete	Blue	P-0B-20C (side-bottom: sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	P-0B-20C (side-bottom: sample location unknown, sample grey floor paint)	
	Interior	1st floor	15	South	Plaster/Lath	Fenc, Green, White, Brown	P-20545155	
	Interior	2nd Floor	9	Floor	Wood	Brown	P-2E1R90F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet M etal walls	White	P-16E4-E (folds-sample white painted wood trim)	
WC-Lead-Comp-2	Interior	Basement	16	North	Sheet Metal walls	White/Green/Dk. Gray	P-01F-R16HC	15
	Interior	Basement	16	East	Brick	Lt. Blue/Stained Brown	P-04R-R16E	
	Interior	Basement	20	West	Brick	Lt. Green	P-05A-R20W	
	Interior	Basement	20	North	Concrete	Beige/Dk. Gray	P-05B-R20NC	
WC-Lead-Comp-3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-05B-R21EB	28
	Interior	Basement	21	West	Brick	Black/ Lt. Green	P-05A-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Dk. Green	P-07V-R23EC	
	Interior	Basement	25	East	Brick	White Lt. Green/ Maroon	P-06R-R25E	
WC-Lead-Comp-4	Interior	Basement	22	South	Painted Plywood	Yellow/Dk. Blue	P-06D-R22SP/E	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green- high	P-20545157LT	
	Interior	2nd Floor	9	South	Plaster/Lath	Yellow	P-2314060	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-1784-E	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-1904-E	
WC-Lead-Comp-5	Interior	Basement	B-1	Ceiling	On wall	White	P-06E-R101C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Stained wall paneling in Room 5	Grey adhesive associated with brown, faux wood wall paneling	Gray	A-009a-R5	
	Exterior	N/A	Roof	Chimney	Light grey fresh wind x-sash (#6)	Light gray	P-2914-E	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-102a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants Workplan for Additional Hazardous Building Materials Sampling - 2023
mg/L = milligrams per liter

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

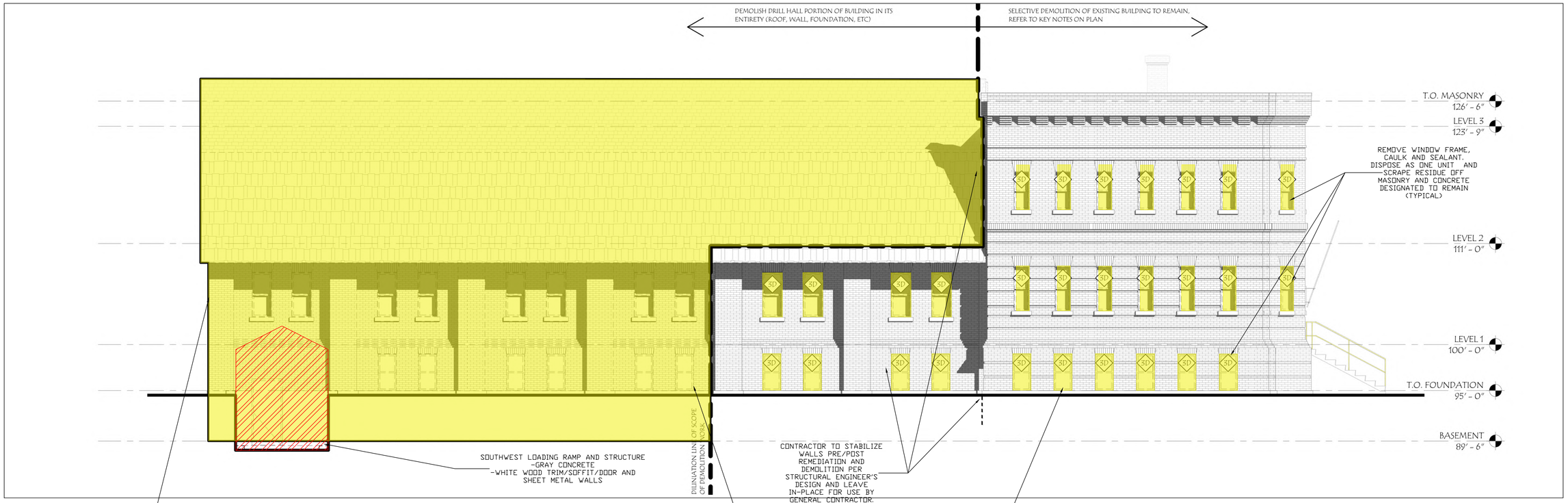
PCB REMEDIATION PLAN - NORTH AND EAST ELEVATIONS

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

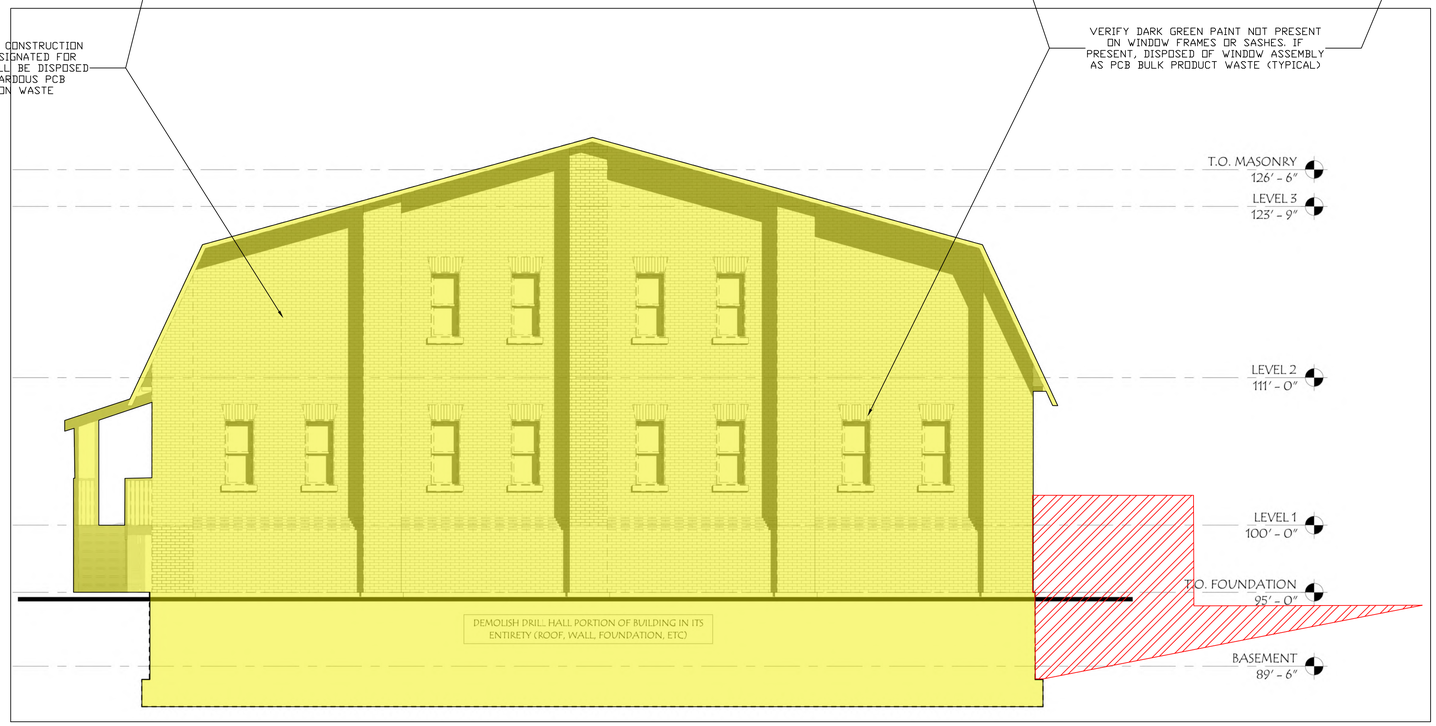
Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	10 OF 17
Revision Number:	0

FIGURE 4D

O:\projects\Town of St. Johnsbury-13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 6 St - I Public Safety_D2-01 - DEMOLITION ELEVATIONS (12-04-2023).dwg



1 D2.02 DEMOLITION ELEVATION - SOUTH
3/16" = 1'-0"



2 D2.02 DEMOLITION ELEVATION - WEST
3/16" = 1'-0"

DEMOLITION KEY SCHEDULE	
KEY	DESCRIPTION
2A	DEMO EXTERIOR BRICK MASONRY WALL
2B	DEMO INTERIOR WALL PARTITION. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
2C	DEMO SITE WALL TO EXTENT SHOWN ON PLAN
2D	DEMO INTERIOR MASONRY WALL TO EXTENT SHOWN. INSTALL NEW STEEL LINTEL AT OPENING HEAD. PATCH AND REPAIR FLOOR AND CEILING FOR NEW CONSTRUCTION.
3A	DEMO EXTERIOR DOOR AND FRAME
3B	DEMO EXTERIOR WINDOW AND FRAME
3C	DEMO INTERIOR DOOR AND FRAME
3D	DEMO EXTERIOR WINDOW AND PREP FOR WINDOW REPLACEMENT
4A	REMOVE EXTERIOR CONCRETE STAIR AND RAILINGS
4B	REMOVE MILLWORK COUNTER
4C	REMOVE EXISTING WOOD RAILING
4D	REMOVE EXISTING SHED ROOF AND ALL SUPPORTS
4E	DEMO EXISTING CONCRETE RAMP
4F	REMOVE EXISTING TOILET PARTITIONS. PATCH AND REPAIR WALL / FLOOR ATTACHEMENT
4G	REMOVE EXISTING WOOD STAIR AND RAILINGS.
5A	REMOVE SINK, CAP PLUMBING IN WALL, COVER WITH S.S. PLATE
5B	REMOVE WALL HUNG URINAL, CAP PLUMBING BEHIND WALL, CAP WITH S.S. PLATE
5C	REMOVE FLOOR MOUNT TOILET

NOTES
1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION ELEVATIONS D2.02 DATED 12/01/2023.
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. CONTRACTOR SHALL SCRAPE ALL LOOSE AND PEALING PAINT FROM ALL SURFACES AND SHOP VAC FLOOR PRIOR TO STARTING REMEDIATION ON A RESPECTIVE FLOOR.
4. CONTRACTOR SHALL WET A RESPECTIVE AREA PRIOR TO REMOVAL TO MINIMIZE DUST.
5. CONTRACTOR TO REMOVE AND DISPOSE OF ALL UNIVERSAL WASTES AS PART OF WORK.
6. CONTRACTOR TO REMOVE ANY VISIBLE PAINT VIA DRY-ICE BLASTING (OR APPROVED EQUAL) FROM ANY CONCRETE OR MASONRY WALLS DESIGNATED TO REMAIN AND APPLY TWO COATS OF ENCAPSULANT.

LEGEND

PCBs ≥ 50.0 PPM (REMOVE PAINT WITH SUBSTRATE, DISPOSE AS PCB BULK PRODUCT WASTE)

PCBs ≥ 1.0 PPM AND <50.0 PPM (REMOVE PAINT WITH SUBSTRATE, DISPOSE AS NON-HAZARDOUS PCB REMEDIATION WASTE)

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

PCB REMEDIATION PLAN - SOUTH AND WEST ELEVATIONS

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	11 OF 17
Revision Number:	0

FIGURE 4E

O:\projects\Town of St. Johnsbury-138541\13854-011\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 7 - St. J Public Safety_D2-02 - DEMOLITION ELEVATIONS (12-04-2023).dwg

MAG NORTH
NAD83 (2011)
GRID NORTH (VT)

GRACE UNITED METHODIST CHURCH
TAX MAP #23-04-61
REFER TO BK. 123, PG. 133

ST. ANDREWS EPISCOPAL CHURCH
TAX MAP #23-04-73
REFER TO BK. 18, PG. 357

PLAN BY J. M. PERHAM FOR
"ST. ANDREWS CHURCH LOT"
DATED DEC. 1912
W/ TRULINE FILE #A25

NOTES
1. DRAWING BASED ON SURVEY BY TRULINE LAND SURVEYORS, INC. TOWN OF ST. JOHNSBURY "ARMORY BUILDING" DATED 01/19/2021.
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. ALL SOILS TO BE DISPOSED OF AS NON-HAZARDOUS WASTE.

LEGEND
EXCAVATION AREA

PARCEL #1
AREA = 0.437 ACRE
(19,038 SQ. FT.)
TAX MAP #23-04-74
REFER TO BK. 56, PG. 223

PLAN BY J. M. PERHAM FOR
"ARMORY SITE"
DATED APR. 1916
W/ TRULINE FILE #D17

PARCEL #2
AREA = 0.012 ACRE
(549 SQ. FT.)
P/O TAX MAP #23-04-61
REFER TO BK. 56, PG. 223

PLAN BY J. M. PERHAM FOR
"ARMORY SITE"
DATED APR. 1916
W/ TRULINE FILE #D17

R. S. & C. C. KOZLOWSKI
TAX MAP #23-04-75
REFER TO BK. 249, PG. 125

PLAN BY J. M. PERHAM FOR
"PASSUMPSIC SAVINGS BANK"
DATED JUNE 1930
W/ TRULINE FILE #BB17

S 71°50'46" E 156.23'
N 15°05'58" E 124.77'
S 15°05'58" W 48.37'
N 13°40'37" E 48.40'
S 70°02'51" E 12.00'
N 69°35'16" W 142.74'
131.94'
S 21°12'38" W 130.40'
18.10' (G)
53.55' (G)
29.65' (G)
24.65' (G)
10.80'
54.98' (G)
62.10' (G)
63.35' (B)
63.10' (B)
52.8' (B)
35.7' (B)

REMOVE PCB IMPACTED SOILS (0-1.5 FT)
REMOVE PAH IMPACTED SOILS (0-2 FT)
REMOVE LEAD AND PAH IMPACTED SOILS (0-2.5 FT)

PAVED PARKING AREA
PAVED DRIVE
CONC. RAMP
AC UNIT
ELEVATOR
OVERHANG
14" APPLE
SIGN
CSW
GUW
GWW
MAIN STREET
CENTRAL STREET

TBM = TOP OF HYDRANT BOLT AT ELEV. 695.96 FT.
TBM = TOP OF HYDRANT BOLT AT ELEV. 697.23 FT.

REFER TO BK. 13 PG. 477
REFER TO RD. BK. 2 PG. 158

Town of St. Johnsbury, VT Received for Record
_____ A.D. _____
at _____ o'clock _____ minutes _____M
and recorded at _____
attest: _____
Town Clerk

10 0 5 10 20 40
1 INCH = 10 FT

— ZONING INFORMATION —
MIXED USE DISTRICT — "MU"

MINIMUM LOT SIZE:	6000 SQ. FT.		
MINIMUM LOT FRONTAGE:	75 FT.		
MINIMUM LOT DEPTH:	N/A		
MINIMUM SETBACKS:	FRONT	SIDE	REAR
	15	15	15
HEIGHT REGULATIONS:	ALL STRUCTURES: 80 FT.		

* BASED ON THE ZONING BY-LAWS FOR THE TOWN OF ST. JOHNSBURY, EFFECTIVE APRIL 30, 2018.

C-1-S
C-2-S
C-3-S
1.5 METER GRID
2 0 1 2 4 8
1 INCH = 2 FT

LEGEND
C-1-S ● VERIFICATION SAMPLE LOCATION — SOIL

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

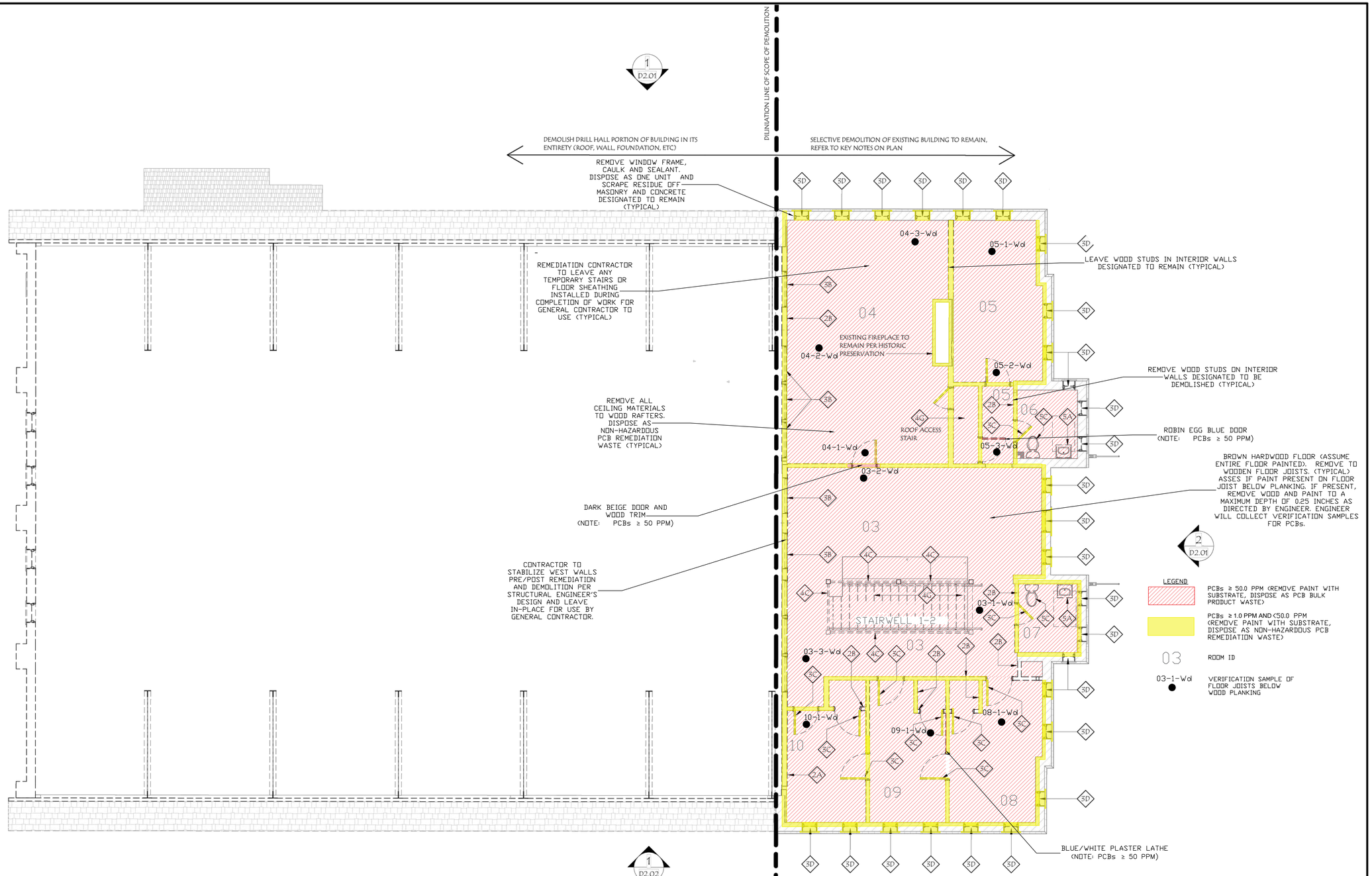
PCB REMEDIATION PLAN -
SOIL REMEDIATION AND PROPOSED VERIFICATION SAMPLE LOCATIONS

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	1" = 10'
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	12 OF 17
Revision Number:	0

FIGURE 4F

G:\projects\Town of St. Johnsbury\13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 2 Fig 8 Site plan.dwg



1 FLOOR PLAN - SECOND FLOOR
D1.03 5/16" = 1'-0"

NOTES
1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION PLAN - LEVEL 2 D1.03 DATED 05/13/2022
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. SAMPLES SHALL BE COLLECTED BY THE ENVIRONMENTAL PROFESSIONAL FOLLOWING FLOOR REMOVAL AND CLEANING.

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, BERMONT

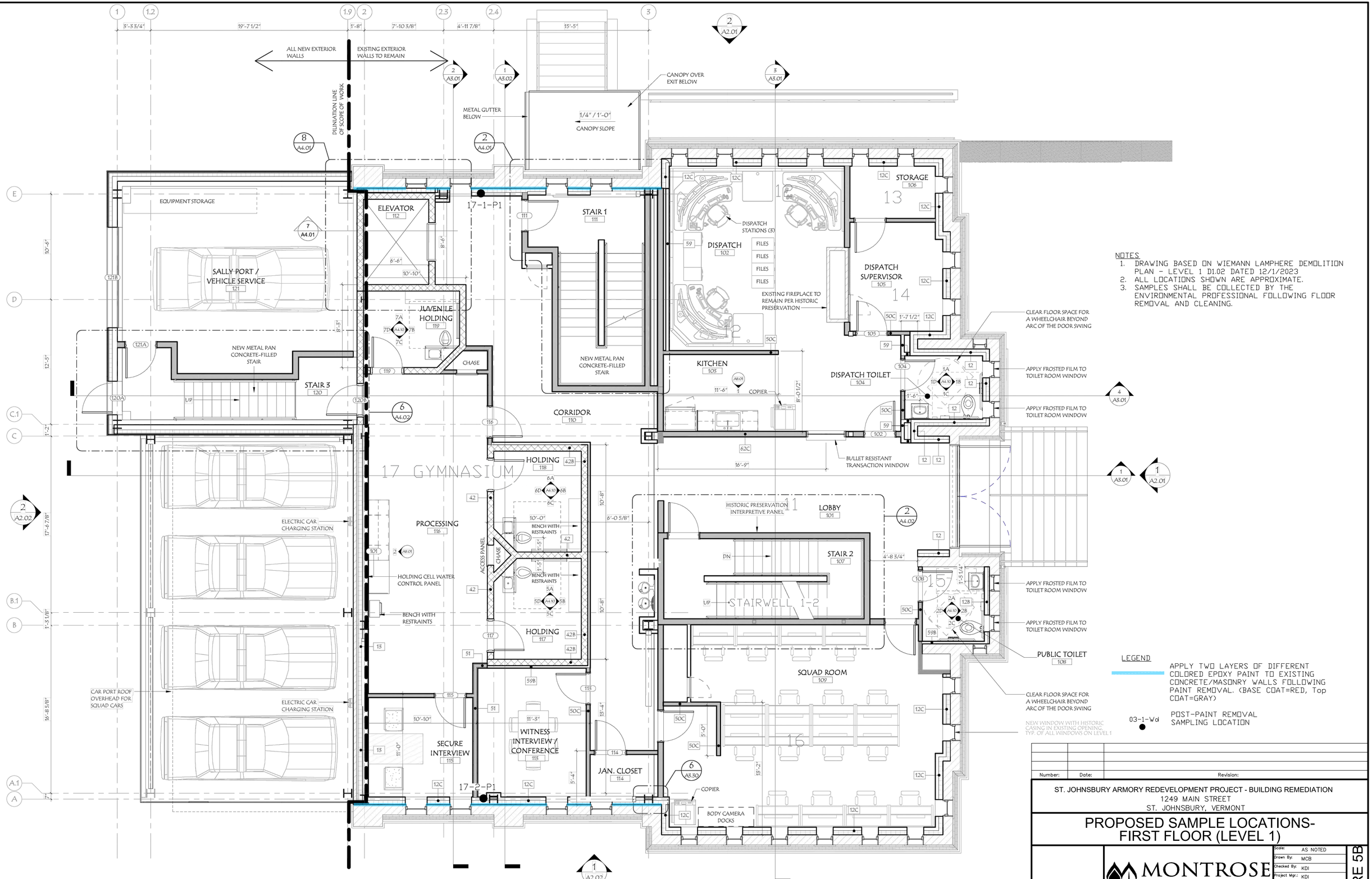
PROPOSED SAMPLE LOCATIONS- SECOND FLOOR (LEVEL 2)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	12/13/23
Sheet No.:	13 OF 17
Revision Number:	0

FIGURE 5a

O:\projects\Town of St. Johnsbury\13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 3 Sr. J Public Safety_D1-03 - DEMOLITION PLAN - LEVEL 2 (12-04-2023).dwg



NOTES

1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION PLAN - LEVEL 1 D1.02 DATED 12/1/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. SAMPLES SHALL BE COLLECTED BY THE ENVIRONMENTAL PROFESSIONAL FOLLOWING FLOOR REMOVAL AND CLEANING.

1 FLOOR PLAN - BASEMENT
A1.01 1/4" = 1'-0"

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

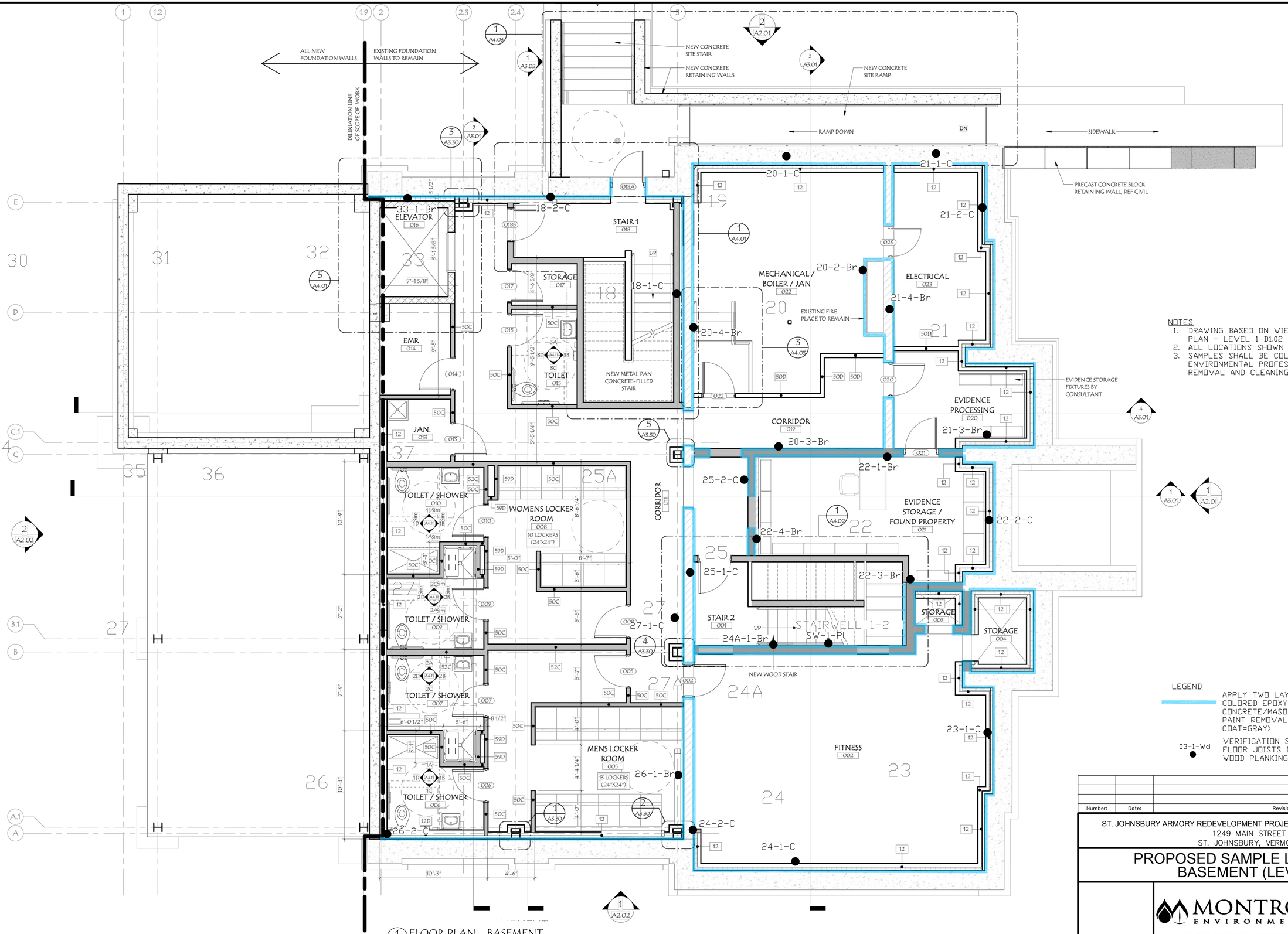
PROPOSED SAMPLE LOCATIONS- FIRST FLOOR (LEVEL 1)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	14 OF 17
Revision Number:	0

FIGURE 5B

O:\projects\Town of St. Johnsbury-13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 9 - 1 Public Safety_A1-01 - FLOOR PLAN - BASEMENT (12-04-2023).dwg



NOTES

1. DRAWING BASED ON WIEMANN LAMPHERE DEMOLITION PLAN - LEVEL 1 D1.02 DATED 12/1/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.
3. SAMPLES SHALL BE COLLECTED BY THE ENVIRONMENTAL PROFESSIONAL FOLLOWING FLOOR REMOVAL AND CLEANING.

LEGEND

APPLY TWO LAYERS OF DIFFERENT COLORED EPOXY PAINT TO EXISTING CONCRETE/MASONRY WALLS FOLLOWING PAINT REMOVAL. (BASE COAT=RED, Top COAT=GRAY)

03-1-Wd VERIFICATION SAMPLE OF FLOOR JOISTS BELOW WOOD PLANKING

1 FLOOR PLAN - BASEMENT
A1.01 1/4" = 1'-0"

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

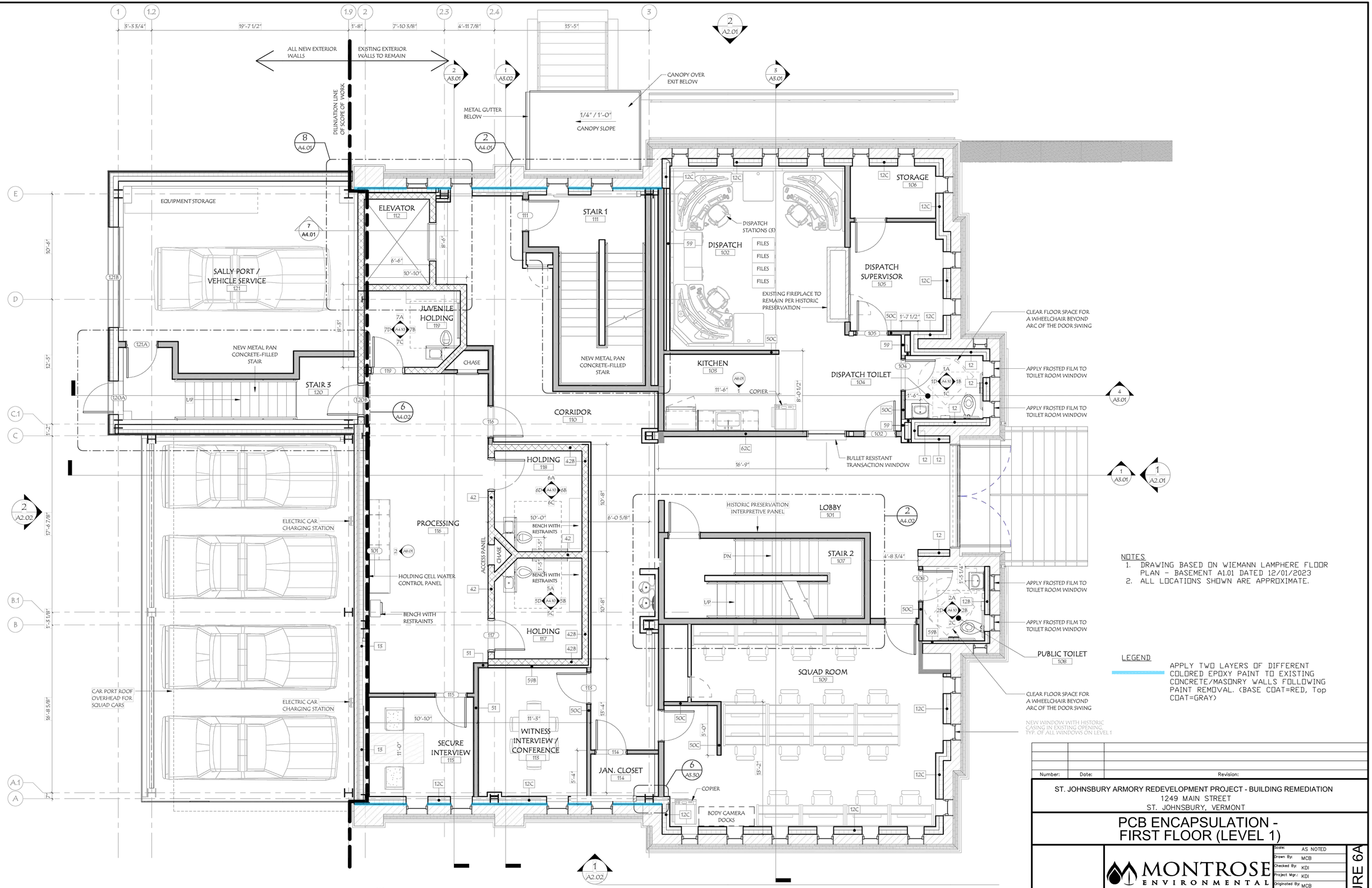
PROPOSED SAMPLE LOCATIONS- BASEMENT (LEVEL 0)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	15 OF 17
Revision Number:	0

FIGURE 5C

O:\projects\Town of St. Johnsbury_13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 9 St - I Public Safety_A1-01 - FLOOR PLAN - BASEMENT (12-04-2023).dwg



NOTES

1. DRAWING BASED ON WIEMANN LAMPHERE FLOOR PLAN - BASEMENT A1.01 DATED 12/01/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.

LEGEND

APPLY TWO LAYERS OF DIFFERENT COLORED EPOXY PAINT TO EXISTING CONCRETE/MASONRY WALLS FOLLOWING PAINT REMOVAL. (BASE COAT=RED, Top COAT=GRAY)

1 FLOOR PLAN - BASEMENT
A1.01 1/4" = 1'-0"

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

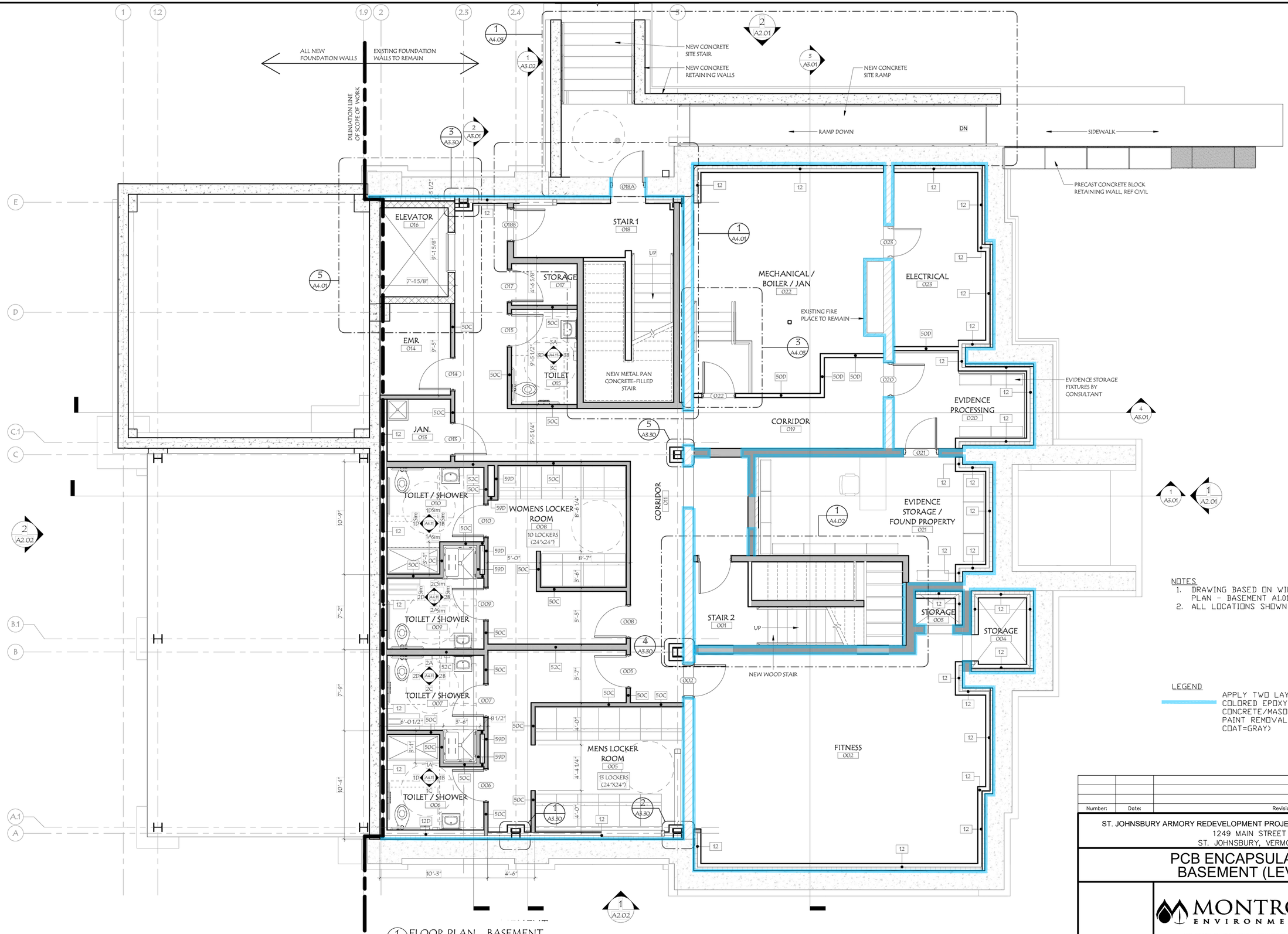
PCB ENCAPSULATION - FIRST FLOOR (LEVEL 1)

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	16 OF 17
Revision Number:	0

FIGURE 6A

O:\projects\Town of St. Johnsbury-13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 9 St. J Public Safety_A1-01 - FLOOR PLAN - BASEMENT (12-04-2023).dwg



NOTES

1. DRAWING BASED ON WIEMANN LAMPHERE FLOOR PLAN - BASEMENT A1.01 DATED 12/01/2023
2. ALL LOCATIONS SHOWN ARE APPROXIMATE.

LEGEND

APPLY TWO LAYERS OF DIFFERENT COLORED EPOXY PAINT TO EXISTING CONCRETE/MASONRY WALLS FOLLOWING PAINT REMOVAL. (BASE COAT=RED, Top COAT=GRAY)

1 FLOOR PLAN - BASEMENT
A1.01 1/4" = 1'-0"

Number:	Date:	Revision:

ST. JOHNSBURY ARMORY REDEVELOPMENT PROJECT - BUILDING REMEDIATION
1249 MAIN STREET
ST. JOHNSBURY, VERMONT

PCB ENCAPSULATION - BASEMENT (LEVEL 0)

MONTROSE ENVIRONMENTAL

MONTROSE ENVIRONMENTAL SOLUTIONS, INC.

1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460-2658
T: 610.840.9100 F: 610.840.9199 montrose-env.com

Scale:	AS NOTED
Drawn By:	MCB
Checked By:	KDI
Project Mgr.:	KDI
Originated By:	MCB
Project No.:	13854
Drawing Date:	1/16/24
Sheet No.:	17 OF 17
Revision Number:	0

FIGURE 6B

O:\projects\Town of St. Johnsbury\13854\13854-01\Field Data and Supporting Documents\Atlas Files_June 2023\30% CONVERTED\Fig 9 St - J Public Safety_A1-01 - FLOOR PLAN - BASEMENT (12-04-2023).dwg

Tables

Table 1A.1	Historical PCB Material Characterization
Table 1A.2	Historical PCB Wipe Characterization
Table 1A.3	Historical Airborne PCB Characterization
Table 1A.4	Historical PCB Concrete Characterization
Table 1B	Historical Asbestos Characterization
Table 1C.1	Historical LBP Characterization
Table 1C.2	Historical Lead Dust Characterization
Table 1D.1	Historical Soil Characterization - PAHs
Table 1D.2	Historical Soil Characterization - PCBs
Table 1D.3	Historical Soil Characterization - Metals
Table 2A	PCB Paints and Coatings Sample Results
Table 2B	PCB Bulk Material Sample Results
Table 2C	PCB Soil Sample Results
Table 2D	Lead Waste Characterization Sample Results
Table 2E	Asbestos Sample Results
Table 2F	PCB Waste Characterization Sample Results
Table 3	Sample Design - Post-Remediation PCB Building Material Samples
Table 4	Sample Design - PCB Excavation Verification Samples

Table 1A.1
Historical PCB Material Characterization
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Substrate	Color	Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	2nd	3	Center	Paint	Light Pink	P-4	Result From 2021	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	45	< 0.3	< 0.3	< 0.3	45
		4	North	Tar	Black	P-2	Result From 2021	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
		9	North	Paint	Light Blue	P-5	Result From 2021	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	22	< 0.4	< 0.4	< 0.4	22
	1st	16	South	Hardwood Subfloor Paper	Not Provided	P-3	Result From 2021	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	7.8	< 0.09	< 0.09	< 0.09	7.8
		Gym	South Flooring	Gym Floor Paper	Not Provided	P-1	Result From 2021	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	4.4	< 0.2	< 0.2	4.4
			North Stairwell	Exterior Tar Caulking	Not Provided	PCB-5B	Result From 2012	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71
			North Stairwell	Exterior Tar Caulking	Not Provided	PCB-5C	Result From 2016	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73
			East Gym Entry	Silver Flashing	Silver	PCB-6A	Result From 2012	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49
					Silver	PCB-6C	Result From 2016	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78
			East Wall	Wall Paint	White	PCB-19B	Result From 2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.4	< 0.50	< 0.50	< 0.50	7.4
			East Wall	Wall Paint	White	PCB-19C	Result From 2016	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	9.0	< 0.73	< 0.73	< 0.73	9.0
	Basement	Stairwell 0 - 1	North	Exterior Window Glaze	Not Provided	PCB-3B	Result From 2012	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64
			North	Exterior Window Glaze	Not Provided	PCB-3C	Result From 2016	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	0.87	< 0.75	< 0.75	< 0.75	0.87
		18	North	Door Caulking	Grey	PCB-1B	Result From 2012	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	14	< 0.89	< 0.89	< 0.89	14
		19	North	Exterior Window Caulk	Not Provided	PCB-4A	Result From 2012	< 0.85	< 0.85	< 0.85	< 0.85	< 0.85	26	< 0.85	< 0.85	< 0.85	26
			North	Exterior Window Caulk	Not Provided	PCB-4C	Result From 2016	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	0.81	< 0.75	< 0.75	< 0.75	0.81
		23	Flooring Throughout	Floor Paint	Grey	PCB-16C	Result From 2012	< 500	< 500	< 500	< 500	< 500	5,700	< 500	< 500	< 500	5,700
			Flooring Throughout	Floor Paint	Grey	PCB-16D	Result From 2016	< 1,700	< 1,700	< 1,700	< 1,700	< 1,700	20,000	< 1,700	< 1,700	< 1,700	20,000
		26	Flooring Throughout	Floor Paint	Blue	PCB-20B	Result From 2012	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	44	< 0.88	< 0.88	< 0.88	44
			Flooring Throughout	Floor Paint	Blue	PCB-20C	Result From 2016	< 9.5	< 9.5	< 9.5	< 9.5	< 9.5	67	< 9.5	< 9.5	< 9.5	67
		32	North	Window Caulk	White	PCB-2A	Result From 2012; Area is Now Former Rooms 30-37	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	1.5	< 0.84	< 0.84	< 0.84	1.5
			North	Window Caulk	White	PCB-2C	Result From 2016; Area is Now Former Rooms 30-37	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73	< 0.73
Exterior	N/A	Roof		Caulking	Black	PCB-9A-9B *	* Total PCBs for This Sample Printed in 2012 Cardno ATC Report; Could Not Locate MDL Figures Appended on Lab Forms	--	--	--	--	--	--	--	--	--	ND *
		Roof		Caulking	Black	PCB-9C	Result From 2016	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77

Notes:
Adapted From the Following Historical Reference(s):
Targeted Brownfields Assessment: Hazardous Building Materials, KGSNE, 9-Mar-21
PCB Building Materials Survey , ATC Group Services LLC, 3-Mar-17
Environmental Survey, Cardno ATC, 28-Mar-13
'--' = indicates all results for that sample were non-detect.
All results reported in parts per million (ppm)
Tan shading indicates a PCB concentration greater than 50 ppm.

Table 1A.2
Historical PCB Wipe Characterization
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Location	Room	Description	Sample ID	Date	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Results (ug/100 cm^2)
Not Provided	Not Provided	Not Provided	W-01	22-Nov-16	Field Blank	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Basement	25	At Room 37	* W-02	22-Nov-16	--	< 2,000	< 2,000	< 2,000	< 2,000	< 2,000	4,500	< 2,000	< 2,000	< 2,000	4,500
	26	East Center	* W-03	22-Nov-16	--	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	23	< 4.0	< 4.0	< 4.0	23
1st Floor	11	Top of Stairs	W-04	22-Nov-16	--	< 20	< 20	< 20	< 20	< 20	110	< 20	< 20	< 20	110
	16	Center	W-05	22-Nov-16	--	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	3.7	< 0.80	< 0.80	< 0.80	3.7
	11	At Door to Room 17	W-06	22-Nov-16	--	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	5.2	< 0.80	< 0.80	< 0.80	5.2
	17	From Door to Room 11	W-07	22-Nov-16	--	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	2.0	< 0.20	< 0.20	< 0.20	2.0
	14	North On Path to Room 13	W-08	22-Nov-16	--	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.89	< 0.20	< 0.20	< 0.20	0.89
	17	Southwest	W-09	22-Nov-16	--	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.22	< 0.20	< 0.20	< 0.20	0.22
2nd Floor	3	Top Step of Stairs	W-10	22-Nov-16	--	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.4	< 1.0	< 1.0	< 1.0	9.4
	3	At Door to Room 9	W-11	22-Nov-16	--	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.81	< 0.20	< 0.20	< 0.20	0.81
	5	At Door to Room 3	W-12	22-Nov-16	--	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.34	< 0.20	< 0.20	< 0.20	0.34

Notes:
Adapted From the Following Historical Reference(s):
PCB Building Materials Survey , ATC Group Services LLC, 3-Mar-17
" * " Indicates a PCB-Painted Surface.
All results reported in micrograms per 100 square centimeters (ug/100 cm^2)
Tan shading indicates a concentration of 1 ug/100 cm^2 or greater.

Table 1A.3
Historical Airborne PCB Characterization
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Location	Room	Description	Sample ID	Date	Comments	Monochlorobiphenyls	Dichlorobiphenyls	Trichlorobiphenyls	Tetrachlorobiphenyls	Pentachlorobiphenyls	Hexachlorobiphenyls	Heptachlorobiphenyls	Octachlorobiphenyls	Nonachlorobiphenyls	Total PCB Results* (ug/m^3)
Exterior	N/A	Not Provided	PCBV-1	21-Nov-16	Outside East Corner of Room 16	< 0.001	< 0.001	< 0.001	< 0.0021	< 0.0021	< 0.0021	< 0.0031	< 0.0031	0.0068	0.0068
1st Floor	11	Main Drill Hall	PCBV-2	21-Nov-16	--	< 0.001	0.0052	0.010	0.042	0.052	0.0051	< 0.0031	< 0.0031	0.0087	0.12
Basement	25	Center - Large Open Area	PCBV-3	21-Nov-16	--	< 0.001	0.0026	0.0019	0.012	0.0072	< 0.0021	< 0.0031	< 0.0031	0.0096	0.033
Not Provided	Not Provided	Not Provided	PCBV-4	21-Nov-16	Field Blank	< 0.0010 ug	< 0.0010 ug	< 0.0010 ug	< 0.0020 ug	< 0.0020 ug	< 0.0020 ug	< 0.0030 ug	< 0.0030 ug	0.0086 ug	0.0086 ug

Notes:
Adapted From the Following Historical Reference(s):
PCB Building Materials Survey , ATC Group Services LLC, 3-Mar-17
*Total = Total of All Homologs Detected
All results reported in micrograms per cubic meter (ug/m^3) unless otherwise specified.
2016 EPA Regional Screening Level - Lowest Risk Value = 0.61 ug/m^3

Table 1A.4
Historical PCB Concrete Characterization
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Location	Room	Description	Date	Sample ID	Depth Interval (Inches)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Results (ug/100 cm^2)
Basement	37	--	27-Nov-16	PCB-CC-01A	0.0 - 0.25	< 99	< 99	< 99	< 99	350	690	< 99	< 99	< 99	1,040
	37	--	27-Nov-16	PCB-CC-01B	0.25 - 0.50	< 47	< 47	< 47	< 47	220	430	< 47	< 47	< 47	650
	37	--	27-Nov-16	PCB-CC-01C	0.50 - 1.0	< 19	< 19	< 19	< 19	76	150	< 19	< 19	< 19	226
	37	--	27-Nov-16	PCB-CC-01D	1.0 - 1.5	< 17	< 17	< 17	< 17	100	210	< 17	< 17	< 17	310
	23	--	27-Nov-16	PCB-CC-02A	0.0 - 0.25	< 9.6	< 9.6	< 9.6	< 9.6	31	51	< 9.6	< 9.6	< 9.6	82
	23	--	27-Nov-16	PCB-CC-02B	0.25 - 0.50	< 8.1	< 8.1	< 8.1	< 8.1	16	29	< 8.1	< 8.1	< 8.1	45
	23	--	27-Nov-16	PCB-CC-02C	0.50 - 1.0	< 0.41	< 0.41	< 0.41	< 0.41	1.3	2.0	< 0.41	< 0.41	< 0.41	3.3
	23	--	27-Nov-16	PCB-CC-02D	1.0 - 1.5	< 0.18	< 0.18	< 0.18	< 0.18	1.1	1.4	< 0.18	< 0.18	< 0.18	2.5
	26	--	27-Nov-16	PCB-CC-03A	0.0 - 0.25	< 1.9	< 1.9	< 1.9	< 1.9	6.3	14	< 1.9	< 1.9	< 1.9	20.3
	26	--	27-Nov-16	PCB-CC-03B	0.25 - 0.50	< 0.49	< 0.49	< 0.49	< 0.49	1.1	2.4	< 0.49	< 0.49	< 0.49	3.5
	26	--	27-Nov-16	PCB-CC-03C	0.50 - 1.0	< 0.44	< 0.44	< 0.44	< 0.44	1.0	2.2	< 0.44	< 0.44	< 0.44	3.2
	26	--	27-Nov-16	PCB-CC-03D	1.0 - 1.5	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	0.12	< 0.093	< 0.093	< 0.093	0.12
	28	--	27-Nov-16	PCB-CC-04A	0.0 - 0.25	< 8.1	< 8.1	< 8.1	< 8.1	< 8.1	26	< 8.1	< 8.1	< 8.1	26
	28	--	27-Nov-16	PCB-CC-04B	0.25 - 0.50	< 1.9	< 1.9	< 1.9	< 1.9	6.6	14	< 1.9	< 1.9	< 1.9	20.6
	28	--	27-Nov-16	PCB-CC-04C	0.50 - 1.0	< 0.40	< 0.40	< 0.40	< 0.40	1.6	3.1	< 0.40	< 0.40	< 0.40	4.7
	28	--	27-Nov-16	PCB-CC-04D	1.0 - 1.5	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	0.75	< 0.087	< 0.087	< 0.087	0.75
	27	--	27-Nov-16	PCB-CC-05A	0.0 - 0.25	< 4.3	< 4.3	< 4.3	< 4.3	12	29	< 4.3	< 4.3	< 4.3	41
	27	--	27-Nov-16	PCB-CC-05B	0.25 - 0.50	< 0.46	< 0.46	< 0.46	< 0.46	1.8	4.5	< 0.46	< 0.46	< 0.46	6.3
	27	--	27-Nov-16	PCB-CC-05C	0.50 - 1.0	< 0.41	< 0.41	< 0.41	< 0.41	0.79	1.8	< 0.41	< 0.41	< 0.41	2.59
	27	--	27-Nov-16	PCB-CC-05D	1.0 - 1.5	< 0.42	< 0.42	< 0.42	< 0.42	0.59	1.4	< 0.42	< 0.42	< 0.42	1.99
	27	FD	27-Nov-16	PCB-CC-05DD	1.0 - 1.5	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	1.3	< 0.15	< 0.15	< 0.15	1.3
	Hallway	R30 - R34	27-Nov-16	PCB-CC-06A	0.0 - 0.25	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	12	2.8	< 1.7	< 1.7	14.8
	Hallway	R30 - R34	27-Nov-16	PCB-CC-06B	0.25 - 0.50	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	3.2	0.69	< 0.40	< 0.40	3.89
	Hallway	R30 - R34	27-Nov-16	PCB-CC-06C	0.50 - 1.0	< 0.088	< 0.088	< 0.088	< 0.088	< 0.088	0.40	< 0.088	< 0.088	< 0.088	0.40
	Hallway	R30 - R34	27-Nov-16	PCB-CC-06D	1.0 - 1.5	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	0.87	< 0.099	< 0.099	< 0.099	0.87
	31	--	27-Nov-16	PCB-CC-07A	0.0 - 0.25	< 17	< 17	< 17	< 17	< 17	82	24	< 17	< 17	106
	31	--	27-Nov-16	PCB-CC-07B	0.25 - 0.50	< 8.3	< 8.3	< 8.3	< 8.3	< 8.3	45	13	< 8.3	< 8.3	58
	31	--	27-Nov-16	PCB-CC-07C	0.50 - 1.0	< 9.2	< 9.2	< 9.2	< 9.2	< 9.2	36	< 9.2	< 9.2	< 9.2	36
	31	--	27-Nov-16	PCB-CC-07D	1.0 - 1.5	< 9.1	< 9.1	< 9.1	< 9.1	< 9.1	41	< 9.1	< 9.1	< 9.1	41
	36	--	27-Nov-16	PCB-CC-08E	0.0 - 0.50	< 18	< 18	< 18	< 18	< 18	180	< 18	< 18	< 18	180
	28	--	27-Nov-16	PCB-CC-09E	0.0 - 0.50	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	1.6	< 0.18	< 0.18	< 0.18	1.6
	27	--	27-Nov-16	PCB-CC-10E	0.0 - 0.50	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	7.0	< 0.82	< 0.82	< 0.82	7.0
	26	--	27-Nov-16	PCB-CC-11E	0.0 - 0.50	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	4.3	< 0.48	< 0.48	< 0.48	4.3
	25	--	27-Nov-16	PCB-CC-12E	0.0 - 0.50	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	14	< 1.8	< 1.8	< 1.8	14
	Hallway	R24 - R25	27-Nov-16	PCB-CC-13E	0.0 - 0.50	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	16	< 1.8	< 1.8	< 1.8	16
	27	--	27-Nov-16	PCB-CC-14E	0.0 - 0.50	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	1.9	< 0.38	< 0.38	< 0.38	1.9

Notes:
Adapted From the Following Historical Reference(s):
PCB Building Materials Survey , ATC Group Services LLC, 3-Mar-17
FD = Field Duplicate Sample Collected for QA/QC
R = Room Number
NS = No Sample Collected For Interval Depth
All results reported in parts per million (ppm)
Tan shading indicates a PCB concentration greater than 50 ppm.

Table 1B
Historical Asbestos Characterization
Targeted Brownfield Analyses
St. Johnsbury Armory
St. Johnsbury, VT

Building Level / General Area	Sample ID	Material & Description	Material Location(s)	Asbestos Percent Type
Basement	SJ-ACM-17	Orange Carpet Glue Remnant	W. Addition - NE Room	--
	SJ-ACM-18		W. Addition - W. End of Hallway	--
	SJ-ACM-21	Fireproof/Retardant Board	Door at Bottom of Stairwell	--
	SJ-ACM-22			--
	SJ-ACM-23			--
	SJ-ACM-24	Boiler Cementitious Coating	Boiler Room	--
	SJ-ACM-25			--
	SJ-ACM-26			--
	SJ-ACM-27	Putty Material	Boiler Door	--
	SJ-ACM-28			--
	SJ-ACM-29			--
	SJ-ACM-30	Firebrick	Boiler - Interior	--
	SJ-ACM-31			--
	SJ-ACM-32		Stacked by Boiler	--
	SJ-ACM-33	Blue-Tinted Insulation	Boiler - Bottom Ext. Layer	--
	SJ-ACM-34			--
	SJ-ACM-35		Boiler - Bottom Layer	--
	SJ-ACM-38	Tan Wall Adhesive	S. Corridor - N. Wall	--
	SJ-ACM-39		S. Corridor - NE Corner	--
	SJ-ACM-44	High Voltage Wire Coating	Boiler Room - Electrical Panel - NW Corner	--
	SJ-ACM-45			--
	16A-16C	Gray Floor Paint	Basement	--
	19A-19C	White Wall Paint		--
	20A-20C	Blue Floor Paint	Rooms 25 & 26	--
	21A-21C	12x12 Beige Floor Tile	Room 18	--
	22A-22C	Mastic on 21A-21C Floor Tile		--
	24A-24C	6" Aircell Pipe Insulation	Room 27	40% Chrysotile
	33A-33C	Brown Glue Dabs	Room 25	--
	35A-35C	Blown-in Insulation	Rooms 18 & 19	--
	38A-38C	Debris on Boiler, Exhaust, Duct & Hot Water Tank	Boiler Room	--
	40A-40C	Pipe Putty	Room 21	--
	42A-42C	Mudded Joint Packing	Room 27	33% Chrysotile
	44A	Boiler Gasket	Boiler Room	--
	N/A	Boiler Internal Materials	Boiler Room	Assumed Positive
First Floor	SJ-ACM-3	Beige Wall Glue	Foyer - S. Wall	--
	SJ-ACM-4			--
	SJ-ACM-10	Brown Flooring Paper	SE Room - S. Side	--
	SJ-ACM-19	Brown Battleship Linoleum	Main Entrance Bathroom - W. Side	--
	SJ-ACM-20		Main Entrance Bathroom - E. Side	--
	SJ-ACM-36	Flooring Glue Remnant	Main Foyer - E. Side	--
	SJ-ACM-37		Main Foyer - W. Side	--
	12A-12C	Carpet mastic	First Floor	--
	29A-29C	Blue & Maroon Resilient Sheet Flooring	Room 12	--
	30A-30C	Mastic on 29A-29C Sheet Flooring		--
Gym	SJ-ACM-1	Black Flooring Felt	Gym Floor - S. Side	--
	SJ-ACM-2		Gym Floor - NE Corner	--
	28A-28C	White Window Sill Wall coating	Gym Windows	--
Second Floor	SJ-ACM-7	Black Electrical Wiring	SW Room	--
	SJ-ACM-8			--
	SJ-ACM-9	Brown Flooring Paper	Large Center Room / Foyer N. Side	--
	SJ-ACM-11	Black Roofing Tar	NW Room - Ceiling - NW Corner	--
	SJ-ACM-12		NW Room - Ceiling - W. Side	--
	SJ-ACM-13	Fireplace Brick	NW Room - E. Fireplace	--
	SJ-ACM-14			--
	SJ-ACM-15	Fireplace Mortar	NW Room - E. Fireplace	--
	SJ-ACM-16			--
	SJ-ACM-40	White 2x4 Ceiling Tile	NE Room - N. Side	--
	SJ-ACM-41		NE Room - S. Side	--
	SJ-ACM-42	Ceiling Panel Remnant	NW Room - N. Side	--
	SJ-ACM-43		NW Room - S. Side	--
Attic	SJ-ACM-5	Black Knob & Tube Wiring	Attic by Roof Hatch - W. Side of Stairs	--
	SJ-ACM-6		Attic by Roof Hatch - Stairwell	--
Roof	07A-07C	Built-up Pebble & Tar	Roof	--
	08A-08C	Roofing Felt		--
Exterior	01A-01C	Gray Door Caulking	Exterior	--
	02A-02C	White Window Caulking		--
	03A-03C	White Window Glazing		--
	04A-04C	White Window Caulking	Exterior	<1%
	05A-05C	Tar Brick Caulking		<1%
	06A-06C	Silver Flashing	Exterior	--
	09A-09C	Black Caulk at Gambrel Flashing		--
Additional KGSNE Samples	Historically Sampled	Plaster Walls & Ceilings	Throughout	2% Chrysotile
	31A-31C	Black Stair Tread Risers	First Floor & Basement	--

Notes:
Adapted From the Following Historical Reference(s):
Targeted Brownfields Assessment: Hazardous Building Materials, KGSNE, 9-Mar-21
Environmental Survey, Cardno ATC, 28-Mar-13
'--' = Indicates the results for that sample were non-detect
Orange shading indicates a positive result for the sampled material.
Positive ACM samples in the Cardno ATC Environmental Survey Report identified as bearing "trace" quantities of asbestos were identified as "<1%".

Table 1C.1
Historical LBP Characterization
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/Interior	Floor	Room	Direction / Descriptor	Substrate	Color	Max XRF Screening Value (mg/cm^2)
ATC Environmental Survey LBP Assessment 12-Dec-12 & 17-Dec-12 (Per Cardno ATC 28-Mar-13)						
Interior	All	All	Window Wells	Wood	White	> 9.9
	Basement	21	Wall	Brick	Blue	3
			Door	Metal	Green	3.4
		All	Floor	Concrete	Grey	1.5
		23	Walls & Ceiling	Brick	Green	1.5
		24	Walls	Brick	Green	3
		25	Walls	Brick	Green	3
			Stair Riser	Wood	White	1.1
Exterior	N/A	N/A	Windows	All Components	White	> 9.9
	N/A	N/A	Side Porch	Wood	White	3
KD Associates LBP Assessment 15-Febr-21 (Per KGSNE 9-Mar-21)						
Interior	Second	3	Walls	Plaster	Tan	1.5
			Column	Wood	Brown	1.9
	N/A	Stairwells	Stair Railing	Wood	Brown	1.9
			Stair Riser	Not Provided	White	1.1
	Basement	22	Floor	Cement	Green	1.5
		23	Ceiling	Metal	White	1.6
			Walls	Brick	Green	1.6
		24	Walls	Brick	Tan	4
		25	Walls	Brick	Green	3.1
			Floor	Cement	Grey	1.3
Exterior	N/A	N/A	Window	Trim	White	19.3
	N/A	N/A	Window	Sash	Green	28.6
	N/A	N/A	Porch	Trim	White	1.7

Notes:
Adapted From the Following Historical Reference(s):
Targeted Brownfields Assessment: Hazardous Building Materials, KGSNE, 9-Mar-21
Environmental Survey, Cardno ATC, 28-Mar-13
XRF = X-Ray Fluorescence
All results reported in milligrams per square centimeter (mg/cm^2)

Table 1C.2
Historical Lead Dust Characterization
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	Floor	Room	Location	Lead Concentration (ug/ft^2)	VT Clearance Level (ug/ft^2)
F-01	2nd	3	Floor	52	40
S-02	2nd	3	Sill	86,000	250
F-03	2nd	8	Floor	250	40
S-04	2nd	8	Sill	20,000	250
F-05	2nd	4	Floor	230	40
F-06	2nd	10	Floor	130	40
F-07	1st	12	Floor	2.7	40
S-08	1st	12	Sill	1,200	250
F-09	1st	16	Floor	21	40
S-10	1st	16	Sill	4,300	250
F-11	1st	17	North Floor	6	40
F-12	1st	17	South Floor	7.5	40
F-13	Basement	26	East Floor	430	40
F-14	Basement	26	Center Floor	350	40
F-15	Basement	26	West Floor	340	40
S-16	Basement	26	East Sill	860	250
S-17	Basement	26	Center Sill	1,800	250
S-18	Basement	26	West Sill	390	250
F-19	Basement	28	Floor	83	40
F-20	Basement	27	Floor	260	40
F-21	Basement	29	Floor	670	40
F-22	Basement	32	Floor	590	40
F-23	Basement	21	Floor	510	40
F-24	Basement	23	Floor	2,600	40
F-25	N/A	N/A	Field Blank	BDL	Not Applicable
F-26	N/A	N/A	Blind Spike *	180 ug	Not Applicable

Notes:
Adapted From the Following Historical Reference(s):
Environmental Survey, Cardno ATC, 28-Mar-13
BDL = Below Detection Limit
" * " = Spike Known Value of 232.6 ug
All results reported in micrograms per square foot (ug/ft^2) unless otherwise specified
Blue shading indicates sample results above above target levels.
Green shading indicates reported location of former firing range area.

Table 1D.1
Historical Soil Characterization - PAHs
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Atlas Boring ID	Depth (fbgs)	BaP TEQ	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene (BaP)	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene
VSS Residential:		**0.07**	**NS**	**NS**	**NS**	**NS**	**TEQ**	**NS**	**NS**	**NS**	**NS**	**NS**	**2,301**	**2,301**	**NS**	**NS**	**2.7**	**NS**	**NS**
Urban Background:		**0.58**	**NS**	**NS**	**NS**	**NS**	**TEQ**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
VSS Non-Resdential:		**1.54**	**NS**	**NS**	**NS**	**NS**	**TEQ**	**NS**	**NS**	**NS**	**NS**	**NS**	**26,371**	**26,371**	**NS**	**NS**	**16**	**NS**	**NS**
BAP TEF:		--	--	--	--	**0.1**	**1**	**0.1**	--	**0.01**	**0.01**	**1**	--	--	**0.1**	--	--	--	--
SB-1	0 - 1.5	< 0.21	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
SB-2	0 - 1.5	< 0.21	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
SB-3	0 - 1.5	**0.40**	< 0.18	< 0.18	< 0.18	**0.19**	**0.24**	**0.31**	< 0.18	< 0.18	**0.23**	< 0.19	**0.37**	< 0.18	< 0.18	< 0.18	< 0.18	**0.20**	**0.38**
SB-4	0 - 1.5	**3.3**	< 0.19	< 0.19	**0.64**	**2.4**	**2.3**	**2.8**	**1.0**	**1.1**	**2.3**	**0.36**	**4.8**	< 0.19	**1.3**	< 0.19	< 0.19	**2.8**	**3.6**
SB-4a	2 - 3.5	**0.138**	< 0.012	< 0.018	< 0.022	**0.075**	**0.0737**	**0.0854**	**0.0387**	**0.0339 J**	**0.0756**	**0.0393**	**0.149**	< 0.016	**0.077**	NA	< 0.010	**0.0758**	**0.123**
SB-6	0 - 1.5	**0.60**	< 0.20	< 0.20	< 0.20	**0.34**	**0.38**	**0.49**	**0.23**	< 0.20	**0.38**	< 0.20	**0.77**	< 0.20	**0.34**	< 0.20	< 0.20	**0.53**	**0.63**
SB-6a	2.5 - 3.5	**0.061**	< 0.012	< 0.018	< 0.022	**0.0342 J**	**0.039**	**0.0506**	**0.0289 J**	**0.0169 J**	**0.0356**	< 0.015	**0.0621**	< 0.016	**0.0598**	NA	< 0.0098	**0.0247 J**	**0.0539**
SB-7	0 - 1.5	**0.23**	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	**0.21**	< 0.18	< 0.18	< 0.18	< 0.18	**0.28**	< 0.18	**0.20**	< 0.18	< 0.18	< 0.18	**0.23**
SB-9	0 - 1.5	**24**	**6.8**	**0.21**	**15**	**19**	**16**	**19**	**7.2**	**7.0**	**17**	**2.7**	**49**	**7.1**	**9.9**	**2.9**	**4.4**	**58**	**38**
SB-9a	2.5 - 3.5	**0.023**	< 0.012	< 0.018	< 0.021	**0.0126 J**	< 0.016	**0.0150 J**	< 0.017	< 0.016	**0.0127 J**	< 0.015	**0.0208 J**	< 0.016	**0.0416**	NA	< 0.0098	< 0.012	**0.0177 J**
SB-10	0 - 1.5	< 0.24	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
SB-12	0 -1.5	< 0.24	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
SB-13	0 - 1.5	< 0.23	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SB-14	0 - 1.5	< 0.23	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
QA/QC Samples:																			
SB-9 Duplicate	2.5 - 3.5	**0.024**	< 0.014	< 0.021	< 0.025	**0.0200 J**	< 0.018	**0.0244 J**	< 0.020	< 0.019	**0.0183 J**	< 0.018	**0.0353 J**	< 0.019	< 0.019	< 0.018	< 0.011	**0.0286 J**	**0.0306 J**
	RPD	4%	--	--	--	45%	--	48%	--	--	36%	--	52%	--	--	--	--	--	53%

Notes:
Adapted From the Following Historical Reference(s):
Site Investigation Report, Atlas Technical Consultants LLC, 11-Oct-22
All results reported in ppm
Bold values indicate detections.
NE = Not Encountered
VSS = Vermont Soil Standards (IRULE, July 2019)
TEF = Toxicity Equivalent Factor
TEQ = Toxicity Equivalent Quotient
BaP TEQ values were calculated from select PAH analytical concentrations
as shown multiplied by the corresponding TEF and summed TEF compounds
that are non-detect were estimated based on half of the provided laboratory limit.
BaP TEQ values are compared to VSS for Residential Soils and
Urban Background values.
Green shaded values are below Residential Values.
Blue Shaded values indicate exceedance of Residential Values.
Orange shaded values indicate exceedance of Urban Background Values.
Red shaded values indicate exceedance of Non-Residential Values.
NS = Not Standard Available
NA = Not Analyzed
J = Estimated Value Below Laboratory Reporting Limit (RL)
fbgs = feet blow ground surface
RPD = Relative Percent Difference

Table 1D.2
Historical Soil Characterization - PCBs
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Atlas Boring ID	Depth (fbgs)	Pace Analytical Sample ID	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
SB-1	0 - 1.5	22E0872-01	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	--
SB-2	0 - 1.5	22E0872-02	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	--
SB-3	0 - 1.5	22E0872-03	< 0.084	< 0.084	< 0.084	< 0.084	< 0.084	< 0.084	< 0.084	< 0.084	< 0.084	--
SB-4	0 - 1.5	22E0872-04	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	--
SB-6	0 - 1.5	22E0872-05	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	--
SB-7	0 - 1.5	22E0872-06	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	--
SB-9	0 - 1.5	22E0872-07	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	--
SB-10	0 - 1.5	22E0872-08	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	--
SB-12	0 - 1.5	22E0872-09	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	--
SB-13	0 - 1.5	22E0872-10	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	< 0.092	--
SB-14	0 - 1.5	22E0872-11	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	--

Notes:
Adapted From the Following Historical Reference(s):
Site Investigation Report, Atlas Technical Consultants LLC, 11-Oct-22
All results reported in ppm
'--' = Indicates that the Total PCBs result for a given sample were non-detect
fbgs = feet blow ground surface

Table 1D.3
Historical Soil Characterization - Metals
Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Atlas Boring ID	Depth (fbgs)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
VSS Residential:		**16**	**11,247**	**6.9**	**40,223**	**400**	**3.1**	**366**	**237**
VSS Non-Resdential:		**16**	**127,382**	**87**	**360,223**	**800**	**3.1**	**4,900**	**2,483**
SB-1	0 - 1.5	< 3.3	**45**	< 0.33	**15**	**20**	**0.043**	< 3.3	< 0.33
SB-2	0 - 1.5	< 3.3	**39**	< 0.33	**17**	**26**	**0.079**	< 3.3	< 0.33
SB-3	0 - 1.5	< 3.6	**24**	< 0.36	**17**	**24**	**0.097**	< 3.6	< 0.36
SB-4	0 - 1.5	< 3.7	**64**	< 0.37	**12.00**	**160**	**0.5**	< 3.7	< 0.37
SB-6	0 - 1.5	< 3.8	**60**	< 0.38	**17**	**110**	**0.18**	< 3.8	< 0.38
SB-7	0 - 1.5	< 3.4	**30**	< 0.34	**13**	**28**	< 0.027	< 3.4	< 0.34
SB-9	0 - 1.5	**4.7**	**35**	< 0.36	**13**	**730**	**0.36**	< 3.6	< 0.36
SB-9a	2.5 - 3.5	NA	NA	NA	NA	**20.5**	NA	NA	NA
SB-10	0 - 1.5	< 4.0	**58**	**1.0**	**11**	**23**	**0.099**	< 4.0	< 0.40
SB-12	0 - 1.5	< 3.9	**48**	< 0.39	**12**	**260**	**0.33**	< 3.9	< 0.39
SB-13	0 - 1.5	< 3.9	**38**	< 0.39	**21**	**9.3**	**0.048**	< 3.9	< 0.39
SB-14	0 - 1.5	< 3.7	**120**	**0.5**	**14**	**290**	**0.98**	< 3.7	**0.93**

Notes:
Adapted From the Following Historical Reference(s):
Site Investigation Report, Atlas Technical Consultants LLC, 11-Oct-22
All results reported in ppm
Bold values indicate detections.
VSS = Vermont Soil Standards (IRULE, July 2019)
Blue Shaded values indicate exceedance of Residential Values.
Red shaded values indicate exceedance of Non-Residential Values.
NA = Not Analyzed
fbgs = feet blow ground surface

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	2nd	3	East	270	Plaster/Lath	Beige/Brown	P-001-R03E		<3.9	<3.9	<3.9	<3.9	<3.9	37	<3.9	<3.9	<3.9	37
			South	270	Plaster/Lath	Beige/Brown/Pink	P-002-R03S		<4.8	<4.8	<4.8	<4.8	<4.8	46	<4.8	<4.8	<4.8	46
			West	270	Plaster/Lath	Beige/Yellow/ Salmon/Brown	P-003-R03W		<4.2	<4.2	<4.2	<4.2	<4.2	43	<4.2	<4.2	<4.2	43
			North	270	Plaster/Lath													
			Ceiling	900	Plaster/Lath	White	P-004-R03C		<3.8	<3.8	<3.8	<3.8	<3.8	29	<3.8	<3.8	<3.8	29
			Wood Trim	15	Wood Trim	Salmon	P-005-R03WT		<4.8	<4.8	<4.8	<4.8	<4.8	58	<4.8	<4.8	<4.8	58
			Door	20		Blue	P-006-R03D		<5.0	<5.0	<5.0	<5.0	<5.0	41	<5.0	<5.0	<5.0	41
			Floor	900	Underlayment													
		4	East	270	Plaster/Lath	Beige/Salmon	P-007-R04E		<4.9	<4.9	<4.9	<4.9	<4.9	23	<4.9	<4.9	<4.9	23
			South	180	Plaster/Lath	Beige/Salmon	P-008-R04S		<4.3	<4.3	<4.3	<4.3	<4.3	17	<4.3	<4.3	<4.3	17
			West	270	Plaster/Lath	Beige/Salmon/ Maroon	P-009-R04W		<4.4	<4.4	<4.4	<4.4	<4.4	24	<4.4	<4.4	<4.4	24
			North	180	Plaster/Lath													
			Ceiling	600	Bare Lath													
			Wood Trim	15		Drk. Beige	P-010-R04WT		<4.7	<4.7	<4.7	<4.7	<4.7	51	<4.7	<4.7	<4.7	51
			Door	20		Drk. Beige	P-011-R04D		<4.7	<4.7	<4.7	<4.7	<4.7	50	<4.7	<4.7	<4.7	50
			Floor	600	Underlayment													
		5	East	180	Plaster/Lath	Lt. Beige	P-012-R05E		<4.7	<4.7	<4.7	<4.7	<4.7	18	<4.7	<4.7	<4.7	18
			South	90	Plaster/Lath	Lt. Blue	P-013-R05S		<4.7	<4.7	<4.7	<4.7	<4.7	31	<4.7	<4.7	<4.7	31
			West	180	Plaster/Lath	Lt. Beige	P-014-R05W		<5.0	<5.0	<5.0	<5.0	<5.0	22	<5.0	<5.0	<5.0	22
			North	90	Plaster/Lath													
			Ceiling	200	Drop Tiles	White	P-015-R05C		<4.2	<4.2	<4.2	<4.2	<4.2	16	<4.2	<4.2	<4.2	16
			Wood Trim	10		Lt. Beige	P-017-R05WT		<4.6	<4.6	<4.6	<4.6	<4.6	35	<4.6	<4.6	<4.6	35
			Door	20		Robin's Egg Blue	P-024-R05D		<4.9	<4.9	<4.9	<4.9	<4.9	72	<4.9	<4.9	<4.9	72
			Floor	200	Hardwood	Brown	P-016-R05F		<4.7	<4.7	<4.7	<4.7	<4.7	21	<4.7	<4.7	<4.7	21
		6	East	72	Plaster/Lath	Drk. Beige/Lt. Green	P-018-R06E		<4.7	<4.7	<4.7	<4.7	<4.7	23	<4.7	<4.7	<4.7	23
			South	72	Plaster/Lath	Drk. Beige/Lt. Green	P-019-R06S		<4.6	<4.6	<4.6	<4.6	<4.6	21	<4.6	<4.6	<4.6	21
			West	72	Plaster/Lath													
			North	72	Plaster/Lath													
			Ceiling	64	Drywall	White	P-020-R06C		<4.9	<4.9	<4.9	<4.9	<4.9	18	<4.9	<4.9	<4.9	18
			Wood Trim	4		Robins Egg Blue/Orange	P-021-R06WT		<4.7	<4.7	<4.7	<4.7	<4.7	38	<4.7	<4.7	<4.7	38
			Door	20		White	P-022-R06D		<3.7	<3.7	<3.7	<3.7	<3.7	49	<3.7	<3.7	<3.7	49
			Floor	64	Hardwood	Brown	P-023-R06F		<4.8	<4.8	<4.8	<4.8	<4.8	52	<4.8	<4.8	<4.8	52
		7	East	54	Plaster/Lath	Drk. Beige	P-025-R07E		<4.9	<4.9	<4.9	<4.9	<4.9	22	<4.9	<4.9	<4.9	22
			South	54	Plaster/Lath	Drk. Beige	P-026-R07S		<4.5	<4.5	<4.5	<4.5	<4.5	14	<4.5	<4.5	<4.5	14
			West	54	Plaster/Lath													
			North	54	Plaster/Lath													
			Wood Trim	3		Drk. Beige/Green	P-029-R07WT		<4.4	<4.4	<4.4	<4.4	<4.4	35	<4.4	<4.4	<4.4	35
			Door	20		Beige	P-037-R07D		<4.8	<4.8	<4.8	<4.8	<4.8	19	<4.8	<4.8	<4.8	19
			Ceiling	36	Drywall	White	P-027-R07C		<4.6	<4.6	<4.6	<4.6	<4.6	33	<4.6	<4.6	<4.6	33
			Floor	36	Hardwood	Brown	P-028-R07F		<4.1	<4.1	<4.1	<4.1	<4.1	36	<4.1	<4.1	<4.1	36
		8	East	180	Plaster/Lath	Yellow/Green	P-030-R08E	Lab ID P-030-R09E	<4.8	<4.8	<4.8	<4.8	<4.8	20	<4.8	<4.8	<4.8	20
			South	108	Plaster/Lath	Yellow	P-031-R08S	Lab ID P-0310R09S	<3.7	<3.7	<3.7	<3.7	<3.7	16	<3.7	<3.7	<3.7	16
			West	180	Plaster/Lath	Yellow	P-032-R08W	Lab ID P-032-R09W	<4.3	<4.3	<4.3	<4.3	<4.3	11	<4.3	<4.3	<4.3	11
			North	108	Plaster/Lath													
			Ceiling	240	Plaster/Lath	White	P-033-R08C		<4.2	<4.2	<4.2	<4.2	<4.2	20	<4.2	<4.2	<4.2	20
			Wood Trim	10		Red/Maroon	P-035-R08WT		<4.9	<4.9	<4.9	<4.9	<4.9	34	<4.9	<4.9	<4.9	34
			Door	20		Red/Maroon	P-036-R08D		<4.9	<4.9	<4.9	<4.9	<4.9	45	<4.9	<4.9	<4.9	45
			Floor	240	Hardwood	Brown	P-034-R08F		<4.9	<4.9	<4.9	<4.9	<4.9	51	<4.9	<4.9	<4.9	51
		9	East	180	Plaster/Lath	Blue/White	P-038-R09E		<4.9	<4.9	<4.9	<4.9	<4.9	50	<4.9	<4.9	<4.9	50
			South	90	Plaster/Lath	Yellow/Lt. Blue	P-039-R09S		<4.8	<4.8	<4.8	<4.8	<4.8	17	<4.8	<4.8	<4.8	17
			West	180	Plaster/Lath	Lt. Beige/Blue	P-040-R09W		<4.4	<4.4	<4.4	<4.4	<4.4	16	<4.4	<4.4	<4.4	16
			North	90	Plaster/Lath													
			Ceiling	200	Plaster/Lath	White	P-041-R09C		<2.4	<2.4	<2.4	<2.4	<2.4	14	<2.4	<2.4	<2.4	14
			Wood Trim	10		Blue	P-043-R09WT		<4.9	<4.9	<4.9	<4.9	<4.9	27	<4.9	<4.9	<4.9	27
			Door	20		Blue	P-044-R09D		<5.0	<5.0	<5.0	<5.0	<5.0	31	<5.0	<5.0	<5.0	31
			Floor	200	Hardwood	Brown	P-042-R09F		<5.0	<5.0	<5.0	<5.0	<5.0	56	<5.0	<5.0	<5.0	56

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	2nd	10	East	180	Plaster/Lath	White	P-045-R10E		<2.4	<2.4	<2.4	<2.4	<2.4	13	<2.4	<2.4	<2.4	13
			South	90	Plaster/Lath	White	P-046-R10S		<4.7	<4.7	<4.7	<4.7	<4.7	21	<4.7	<4.7	<4.7	21
			West	180	Plaster/Lath	White	P-047-R10W		<4.9	<4.9	<4.9	<4.9	<4.9	19	<4.9	<4.9	<4.9	19
			North	90	Plaster/Lath													
			Ceiling	200	Bare Lath													
			Wood Trim	10		White	P-156-R10WT		<9.9	<9.9	<9.9	<9.9	<9.9	38	<9.9	<9.9	<9.9	38
			Door	20				No Door										
			Floor	200	Underlayment													
	1st	Stairwell 1-2	East	NA	NA													
			South	225	Plaster/Lath	White/Salmon	P-257-S12S		<4.6	<4.6	<4.6	<4.6	<4.6	55	<4.6	<4.6	<4.6	55
			West	54	Plaster/Lath													
			North	225	Plaster/Lath	White	P-223-S12N		<4.7	<4.7	<4.7	<4.7	<4.7	64	<4.7	<4.7	<4.7	64
			Ceiling	150	Plaster/Lath	Beige/White/Red	P-220-S12C		<3.5	<3.5	<3.5	<3.5	<3.5	19	<3.5	<3.5	<3.5	19
			Wood Rails	20		Beige	P-274-S12R		<3.9	<3.9	<3.9	<3.9	<3.9	50	<3.9	<3.9	<3.9	50
			Floor	150	Wood Steps	Light Green/Orange/Blue	P-155-S12F		<9.9	<9.9	<9.9	<9.9	<9.9	65	<9.9	<9.9	<9.9	65
		11	East	135	Drywall over	Beige/White	P-158-R11EDW		<0.50	<0.50	<0.50	<0.50	<0.50	2.7 J	<0.50	<0.50	<0.50	2.7
			East	135	Plaster/Lath	White/Orange/Light Green	P-212-R11EP		<3.9	<3.9	<3.9	<3.9	<3.9	16	<3.9	<3.9	<3.9	16
			South	270	Drywall over	Salmon	P-217-R11SDW		<1.8	<1.8	<1.8	<1.8	<1.8	6.2	<1.8	<1.8	<1.8	6.2
			South	270	Plaster/Lath			No plaster										
			West	135	Drywall over	Salmon	P-258-R11WDW		<3.9	<3.9	<3.9	<3.9	<3.9	15	<3.9	<3.9	<3.9	15
			West	135	Plaster/Lath	White	P-164-R11WP		<4.1	<4.1	<4.1	<4.1	<4.1	20	<4.1	<4.1	<4.1	20
			North	270	Drywall over Plaster/Lath													
			Ceiling	450	Drywall over	White	P-254-R11CDW		<0.50	<0.50	<0.50	<0.50	3.7 J	3.4 J	<0.50	<0.50	<0.50	3.4
			Ceiling	450	Plaster/Lath	White	P-231-R11CP		<0.91	<0.91	<0.91	<0.91	<0.91	1.7	<0.91	<0.91	<0.91	1.7
			Wood Trim	7.5		Dark Green/Beige/Blue	P-248-R11WT		<4.2	<4.2	<4.2	<4.2	<4.2	33	<4.2	<4.2	<4.2	33
			Door	20		White/Beige/Blue	P-250-R11D		<4.7	<4.7	<4.7	<4.7	<4.7	50	<4.7	<4.7	<4.7	50
			Floor	450	Hardwood	Brown	P-157-R11F		<2.0	<2.0	<2.0	<2.0	<2.0	11	<2.0	<2.0	<2.0	11
		12	East	270	Drywall over	Beige/White	P-244-R12EDW		<0.45	<0.45	<0.45	<0.45	2.5	3	<0.45	<0.45	<0.45	5.5
			East	270	Plaster/Lath	Beige/Blue	P-251-R12EW		<2.3	<2.3	<2.3	<2.3	<2.3	10	<2.3	<2.3	<2.3	10
			South	180	Drywall over	Light Yellow	P-162-R12SDW		<0.80	<0.80	<0.80	<0.80	3.6	3.3	<0.80	<0.80	<0.80	6.9
			South	180	Plaster/Lath			No plaster										
			West	270	Drywall over													
			West	270	Plywood													
			North	180	Drywall over	White	P-243-R12NDW		<2.3	<2.3	<2.3	<2.3	<2.3	6.6	<2.3	<2.3	<2.3	6.6
			North	180	Plaster/Lath	White	P-247-R12NP		<0.42	<0.42	<0.42	<0.42	<0.42	2.4	<0.42	<0.42	<0.42	2.4
			Ceiling	600	Drywall	White	P-214-R12CDW		<1.0	<1.0	<1.0	<1.0	<1.0	5.3	<1.0	<1.0	<1.0	5.3
			Ceiling	600	Particle board	White	P-213-R12CPB		<2.3	<2.3	<2.3	<2.3	<2.3	9	<2.3	<2.3	<2.3	9
			Ceiling	600	Plaster/Lath	White	P-242-R12-CP		<0.37	<0.37	<0.37	<0.37	<0.37	0.66	<0.37	<0.37	<0.37	0.66
			Wood Trim	15		Green/Blue	P-228-R12WT		<4.1	<4.1	<4.1	<4.1	<4.1	26	<4.1	<4.1	<4.1	26
			Floor	600	Hardwood	Brown	P-234-R12F		<0.94	<0.94	<0.94	<0.94	7	6.4	<0.94	<0.94	<0.94	13
		13	East	54	Plaster/Lath	Dark Green/Light Green	P-233-R13E		<4.1	<4.1	<4.1	<4.1	<4.1	8.3	<4.1	<4.1	<4.1	8.3
			South	90	Plaster/Lath	Light Green/Dark Green	P-225-R13S		<4.2	<4.2	<4.2	<4.2	<4.2	4.5	<4.2	<4.2	<4.2	4.5
			West	54	Plaster/Lath													
			North	90	Plaster/Lath													
			Ceiling	60	Wood Panel	White	P-230-R13CWP		<2.2	<2.2	<2.2	<2.2	<2.2	4.5	<2.2	<2.2	<2.2	4.5
			Ceiling	60	Plaster/Lath	White	P-216-R13CP		<0.092	<0.092	<0.092	<0.092	<0.092	0.21	<0.092	<0.092	<0.092	0.21
			Wood Trim	3		Dark Blue	P-218-R13WT		<3.4	<3.4	<3.4	<3.4	<3.4	11	<3.4	<3.4	<3.4	11
			Door	20		White Beige	P-240-R13D		<3.9	<3.9	<3.9	<3.9	<3.9	25	<3.9	<3.9	<3.9	25
			Floor	60	Hardwood	Brown	P-232-R13F		<4.8	<4.8	<4.8	<4.8	<4.8	27	<4.8	<4.8	<4.8	27
		14	East	216	Drywall	Beige	P-219-R14EDW		<1.8	<1.8	<1.8	<1.8	<1.8	6.8	<1.8	<1.8	<1.8	6.8
			East	216	Plaster/Lath	White	P-227-R14-EP		<1.7	<1.7	<1.7	<1.7	1.8	3	<1.7	<1.7	<1.7	4.8
			South	108	Drywall	Salmon	P-226-R14SDW		<2.1	<2.1	<2.1	<2.1	<2.1	12	<2.1	<2.1	<2.1	12
			South	108	Plaster/Lath	White	P-255-R14SP		<4.2	<4.2	<4.2	<4.2	<4.2	5.3	<4.2	<4.2	<4.2	5.3
			West	216	Drywall	Beige/Yellow	P-163-R14WDW		<0.89	<0.89	<0.89	<0.89	3.5	2.1	<0.89	<0.89	<0.89	5.6
			West	216	Plaster/Lath	Pink	P-249-R14WP		<0.43	<0.43	<0.43	<0.43	<0.43	1.5	<0.43	<0.43	<0.43	1.5
			North	108	Drywall over Plaster/Lath													
			Ceiling	288	Drywall	White	P-229-R14CDW		<2.2	<2.2	<2.2	<2.2	<2.2	8.9	<2.2	<2.2	<2.2	8.9
			Ceiling	288	Drop Ceiling Wood Panel	White	P-160-R14CWP		<2.0	<2.0	<2.0	<2.0	<2.0	8.3	<2.0	<2.0	<2.0	8.3
			Ceiling	288	Plaster/Lath	White	P-208-R14CP		<0.48	<0.48	<0.48	<0.48	<0.48	1.4	<0.48	<0.48	<0.48	1.4
			Wood Trim	12		Green/Blue	P-159-R14WT		<4.9	<4.9	<4.9	<4.9	<4.9	20	<4.9	<4.9	<4.9	20
			Door	20				No door										
			Floor	288	Hardwood	Brown/Yellow	P-154-R14F		<2.0	<2.0	<2.0	<2.0	<2.0	12	<2.0	<2.0	<2.0	12

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	1st	15	East	54	Plaster/Lath	Pink/Green/ White/Brown	P-259-R15E		<4.5	<4.5	<4.5	<4.5	<4.5	56	<4.5	<4.5	<4.5	56
			South	54	Plaster/Lath	Pink/Green/ White/Brown	P-236-R15S		<3.8	<3.8	<3.8	<3.8	<3.8	59	<3.8	<3.8	<3.8	59
			West	54	Plaster/Lath													
			North	54	Plaster/Lath													
			Ceiling	36	Plywood panel	Beige/Pink/Brown	P-215-R15CPW		<4.1	<4.1	<4.1	<4.1	<4.1	25	<4.1	<4.1	<4.1	25
			Ceiling	36	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP		<0.43	<0.43	<0.43	<0.43	<0.43	0.59	<0.43	<0.43	<0.43	0.59
			Wood Trim	3		Light Brown/Blue/White	P-221-R15WT		<3.8	<3.8	<3.8	<3.8	<3.8	63	<3.8	<3.8	<3.8	63
			Door	20		Dark Green/White	P-253-R15D		<4.4	<4.4	<4.4	<4.4	<4.4	32	<4.4	<4.4	<4.4	32
			Floor	36	Vinyl/Lin over Hardwood													
		16	East	225	Wood Panel	White	P-134-R16EW		<4.0	<4.0	<4.0	<4.0	<4.0	21	<4.0	<4.0	<4.0	21
			East	225	Plaster/Lath	Light Green/Dark Green	P-133-R16EP		<0.46	<0.46	<0.46	<0.46	<0.46	5.5	<0.46	<0.46	<0.46	5.5
			South	270	Wood Panel	White	P-161-R16SWP		<5.0	<5.0	<5.0	<5.0	17	18	<5.0	<5.0	<5.0	35
			South	270	Plaster/Lath	Green	P-209-R16SP		<0.97	<0.97	<0.97	<0.97	2.1 J	2.3	<0.97	<0.97	<0.97	2.3
			West	225	None													
			North	270	Wood Panel	Green/White	P-210-R16NWP		<4.4	<4.4	<4.4	<4.4	<4.4	26	<4.4	<4.4	<4.4	26
			North	270	Plaster/Lath	White	P-222-R16NP		<3.6	<3.6	<3.6	<3.6	<3.6	16	<3.6	<3.6	<3.6	16
			Ceiling	750	Plaster/Lath	White	P-207-R16C		<4.2	<4.2	<4.2	<4.2	<4.2	16	<4.2	<4.2	<4.2	16
			Wood Trim	13		Dark Green	P-135-R16WT		<3.8	<3.8	<3.8	<3.8	<3.8	33	<3.8	<3.8	<3.8	33
			Door	20			P-165-R16D		<4.4	<4.4	<4.4	<4.4	<4.4	34	<4.4	<4.4	<4.4	34
			Floor	750	Underlayment													
		Gym	East	1,386	Wood paneling	White	P-145-EWP1		<0.99	<0.99	<0.99	<0.99	<0.99	3.4	<0.99	<0.99	<0.99	3.4
						White	P-146-EWP2		<1.0	<1.0	<1.0	<1.0	<1.0	5.8	<1.0	<1.0	<1.0	5.8
						White/Green	P-147-EWP3		<1.0	<1.0	<1.0	<1.0	<1.0	5.6	<1.0	<1.0	<1.0	5.6
				1386	Particle Board	Green	P-148-EPB1		<0.99	<0.99	<0.99	<0.99	<0.99	9.3	<0.99	<0.99	<0.99	9.3
						Green	P-149-EPB2		<1.0	<1.0	<1.0	<1.0	<1.0	4.7	<1.0	<1.0	<1.0	4.7
						Green	P-150-EPB3		<2.0	<2.0	<2.0	<2.0	<2.0	19	<2.0	<2.0	<2.0	19
				1386	Plaster/Lath	White	P-151-EP1		<0.099	<0.099	<0.099	<0.099	<0.099	0.55	<0.099	<0.099	<0.099	0.55
						White	P-152-EP2		<0.10	<0.10	<0.10	<0.10	<0.10	0.62	<0.10	<0.10	<0.10	0.62
						White	P-153-EP3		<0.10	<0.10	<0.10	<0.10	<0.10	1.2	<0.10	<0.10	<0.10	1.2
					Cellotex	Light Green	P-265-R17EC1	Added during initial sample collection	<0.44	<0.44	<0.44	<0.44	<0.44	6.3	<0.44	<0.44	<0.44	6.3
						Light Green	P-266-R17EC2	Added during initial sample collection	<0.44	<0.44	<0.44	<0.44	<0.44	5.3 J	<0.44	<0.44	<0.44	5.3
						White	P-267-R17EC3	Added during initial sample collection	<0.38	<0.38	<0.38	<0.38	<0.38	2.9	<0.38	<0.38	<0.38	2.9
						White	P-268-R17EC4	Added during initial sample collection	<0.42	<0.42	<0.42	<0.42	<0.42	3.1	<0.42	<0.42	<0.42	3.1
			South	957	Brick	White/Blue	P-252-R17S		<1.9	<1.9	<1.9	<1.9	<1.9	12	<1.9	<1.9	<1.9	12
			West	1,386	Brick	White/Yellow	P-204-R17W	Taken from high spot on the wall	<1.8	<1.8	<1.8	<1.8	<1.8	4.8	<1.8	<1.8	<1.8	4.8
				1,386	Brick	White/Yellow	P-205-R17W	Taken from a low spot on the wall	<2.3	<2.3	<2.3	<2.3	<2.3	8.2	<2.3	<2.3	<2.3	8.2
				1,386	Brick	White/Yellow	P-206-R17W	Taken from a low spot on the wall	<1.9	<1.9	<1.9	<1.9	<1.9	10	<1.9	<1.9	<1.9	10
			North	957	Brick	White/Yellow/Green	P-136-GN		<0.45	<0.45	<0.45	<0.45	<0.45	6.1	<0.45	<0.45	<0.45	6.1
			Ceiling	5,481	Particle board/plywood	White/Beige	P-193-GC		<0.48	<0.48	<0.48	<0.48	<0.48	1.6	<0.48	<0.48	<0.48	1.6
					Particle board/plywood	White/Beige	P-194-GC		<0.38	<0.38	<0.38	<0.38	<0.38	0.64	<0.38	<0.38	<0.38	0.64
					Particle board/plywood	White/Beige	P-195-GC		<0.37	<0.37	<0.37	<0.37	<0.37	0.85	<0.37	<0.37	<0.37	0.85
					Particle board/plywood	White/Beige	P-196-GC		<0.42	<0.42	<0.42	<0.42	<0.42	1.5	<0.42	<0.42	<0.42	1.5
					Particle board/plywood	White/Beige	P-197-GC		<0.37	<0.37	<0.37	<0.37	<0.37	0.57	<0.37	<0.37	<0.37	0.57
					Particle board/plywood	White/Beige	P-198-GC		<0.40	<0.40	<0.40	<0.40	<0.40	1.1	<0.40	<0.40	<0.40	1.1
			Door	20				No door										
			Metal Girders	1,500	Painted metal	White	P-199		<1.9	<1.9	<1.9	<1.9	<1.9	7.6	<1.9	<1.9	<1.9	7.6
							P-200		<0.46	<0.46	<0.46	<0.46	<0.46	4.6	<0.46	<0.46	<0.46	4.6
							P-201		<1.0	<1.0	<1.0	<1.0	<1.0	7.9	<1.0	<1.0	<1.0	7.9
							P-202		<1.9	<1.9	<1.9	<1.9	<1.9	8.5	<1.9	<1.9	<1.9	8.5
			Floor	4,933	Hardwood/ polyurethane	Brown	P-137-GFN	Taken from north section of the floor	<0.50	<0.50	<0.50	<0.50	<0.50	3	<0.50	<0.50	<0.50	3
						Brown	P-138-GFE	Taken from east section of the floor	<0.49	<0.49	<0.49	<0.49	<0.49	3.6	<0.49	<0.49	<0.49	3.6
						Brown	P-139-GFS	Taken from south section of the floor	<0.43	<0.43	<0.43	<0.43	<0.43	7.1	<0.43	<0.43	<0.43	7.1
						Brown	P-140-GFW	Taken from west section of the floor	<0.45	<0.45	<0.45	<0.45	<0.45	4.1	<0.45	<0.45	<0.45	4.1
						Brown	P-141-GFC	Taken from central section of the floor	<1.0	<1.0	<1.0	<1.0	<1.0	7.9	<1.0	<1.0	<1.0	7.9
			Floor	164	Hardwood/Dk green	Dark Green	P-142-GFDG		<0.98	<0.98	<0.98	<0.98	<0.98	3.7	<0.98	<0.98	<0.98	3.7
			Floor	164	Hardwood/Lt green	Light Green	P-143-GFLG		<2.0	<2.0	<2.0	<2.0	<2.0	13	<2.0	<2.0	<2.0	13
			Floor	164	Hardwood/White	White	P-144-GFW		<0.10	<0.10	<0.10	<0.10	<0.10	1.4	<0.10	<0.10	<0.10	1.4

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	Basement	Stairwell 0-1	East		NA													
			South	225	Plaster/Lath	Beige/Green/Brown	P-062-S01S		<2.0	<2.0	<2.0	<2.0	<2.0	18	<2.0	<2.0	<2.0	18
			West	54	Plaster/Lath	Beige/Green/Brown	P-063-S01W		<2.0	<2.0	<2.0	<2.0	<2.0	40	<2.0	<2.0	<2.0	40
			North	225	Plaster/Lath	Beige/Brown	P-064-S01N		<4.0	<4.0	<4.0	<4.0	<4.0	43	<4.0	<4.0	<4.0	43
			Ceiling	150	Drywall	White	P-066-S01C		<0.20	<0.20	<0.20	<0.20	<0.20	0.33 J	<0.20	<0.20	<0.20	0.33
			Wood Rails	20		Dark Green	P-065-S01R	Labeled P-065-S01C in lab report	<4.0	<4.0	<4.0	<4.0	<4.0	81 J	<4.0	<4.0	<4.0	81
			Door	20		White/ Dark Green	P-067-S01D		<4.0	<4.0	<4.0	<4.0	<4.0	65	<4.0	<4.0	<4.0	65
			Floor	150	Wood Steps	White/Dark Green/ Black/Brown/ Light Blue	P-239-S01F		<7.6	<7.6	<7.6	<7.6	<7.6	110	<7.6	<7.6	<7.6	110
		18	East	180	Brick	Light Blue/Salmon/ Brown	P-048-R18E		<9.8	<9.8	<9.8	<9.8	<9.8	180	<9.8	<9.8	<9.8	180
			South	135	Brick	Light Blue/ White	P-049-R18S		<24	<24	<24	<24	<24	330	<24	<24	<24	330
			West	180	Brick													
			North	135	Concrete	White/Green/Drk. Grey	P-051-R18NC		<24	<24	<24	<24	<24	290	<24	<24	<24	290
					Brick	White/Beige	P-050-R18NB		<8.8	<8.8	<8.8	<8.8	<8.8	110	<8.8	<8.8	<8.8	110
			Ceiling	300	Drywall													
			Ceiling	300	Pressed tin	Dark Beige/Black	P-052-R18C		<4.3	<4.3	<4.3	<4.3	<4.3	19	<4.3	<4.3	<4.3	19
			Ceiling	300	Lath													
			Floor	300	Gray Painted Concrete													
		20	East	270	Brick	White/Dark Grey	P-053-R20E		<250	<250	<250	<250	<250	4,000	<250	<250	<250	4,000
			South	180	Brick													
			West	270	Brick	Light Green	P-054-R20W		<250	<250	<250	<250	<250	5,100	<250	<250	<250	5,100
			North	180	Concrete	Beige/Drk. Grey	P-056-R20NC		<480	<480	<480	<480	<480	6,400	<480	<480	<480	6,400
					Brick	Light Green	P-055-R20NB		<90	<90	<90	<90	<90	1,300	<90	<90	<90	1,300
			Ceiling	600	None													
			Floor	600	Unpainted Concrete													
		21	East	270	Concrete	Light Blue/ Brown	P-057-R21EC		<8.8	<8.8	<8.8	<8.8	<8.8	86	<8.8	<8.8	<8.8	86
					Brick	Pink/Lt. Green/Brown	P-058-R21EB		<4.4	<4.4	<4.4	<4.4	<4.4	52	<4.4	<4.4	<4.4	52
			South	180	Brick	White/Light Blue	P-059-R21S		<47	<47	<47	<47	<47	380	<47	<47	<47	380
			West	270	Brick	Blue/Light Green	P-094-R21W		<3.9	<3.9	<3.9	<3.9	<3.9	51	<3.9	<3.9	<3.9	51
			North	180	Concrete/Brick													
			Ceiling	600	Drywall	White	P-060-R21C		<4.6	<4.6	<4.6	<4.6	<4.6	50	<4.6	<4.6	<4.6	50
			Door	20		Light Blue/White/ Green/Orange/ yellow	P-061-R21D		<4.0	<4.0	<4.0	<4.0	<4.0	52	<4.0	<4.0	<4.0	52
			Floor	600	Beige Painted Concrete	Grey/Beige	P-095-R21FN	North End	<2.0	<2.0	<2.0	<2.0	<2.0	21	<2.0	<2.0	<2.0	21
			Floor	600	Beige Painted Concrete	Grey/Beige	P-096-R21FS	South End	<2.0	<2.0	<2.0	<2.0	10	16	<2.0	<2.0	<2.0	26
		22	East	108	Painted Drywall	Yellow/White	P-068-R22EDW		<4.0	<4.0	<4.0	<4.0	<4.0	52	<4.0	<4.0	<4.0	52
			East	108	Concrete Foundation	Brown	P-069-R22EC		<40	<40	<40	<40	<40	460	<40	<40	<40	460
			South	225	Printed Plywood	Yellow/Dark Blue	P-080-R22SPW		<2.0	<2.0	<2.0	<2.0	<2.0	25	<2.0	<2.0	<2.0	25
			South	225	Brick	Light Blue	P-081-R22SB		<20	<20	<20	<20	<20	400	<20	<20	<20	400
			West	108	Painted Plywood	White	P-070-R22WPW		<2.0	<2.0	<2.0	<2.0	<2.0	21	<2.0	<2.0	<2.0	21
			West	108	Brick	Light Blue	P-071-R22WB		<20	<20	<20	<20	<20	280	<20	<20	<20	280
			North	225	Painted Plywood													
			North	225	Brick													
			Ceiling	300	2x4 wood	White	P-073-R22C		<4.0	<4.0	<4.0	<4.0	<4.0	67	<4.0	<4.0	<4.0	67
			Door	20		White	P-072-R2D	Sample ID was misprinted by field staff, but is applicable to Room 22	<20	<20	<20	<20	<20	200	<20	<20	<20	200
			Floor	300	Gray Painted Concrete													
		23	East	225	Concrete	Salmon/Dark Green	P-074-R23EC		<10	<10	<10	<10	<10	150	<10	<10	<10	150
					Brick	Salmon/Light Green/White	P-075-R23EB		<4.0	<4.0	<4.0	<4.0	<4.0	65	<4.0	<4.0	<4.0	65
			South	144	Concrete/Brick													
			West	225	Brick	Salmon/Light Green	P-077-R23W		<9.9	<9.9	<9.9	<9.9	<9.9	120	<9.9	<9.9	<9.9	120
			North	144	Brick	Salmon	P-078-R23N		<10	<10	<10	<10	<10	150	<10	<10	<10	150
			Ceiling	400	Pressed tin over lath	White	P-224-R23C		<45	<45	<45	<45	<45	950	<45	<45	<45	950
			Wood Trim	13		Dark Green/White	P-076-R23EWT		<10	<10	<10	<10	<10	92	<10	<10	<10	92
			Door	20		White/Dark Blue	P-079-R23D		<9.8	<9.8	<9.8	<9.8	<9.8	75	<9.8	<9.8	<9.8	75
			Floor	400	Gray Painted Concrete													

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	Basement	24	East	144	Brick	Salmon/White/Light Green	P-082-R24E		<9.8	<9.8	<9.8	<9.8	<9.8	120	<9.8	<9.8	<9.8	120
			South	135	Concrete	Beige/ Light Green	P-083-R24SC		<9.9	<9.9	<9.9	<9.9	<9.9	130	<9.9	<9.9	<9.9	130
					Brick	Beige/ Light Green	P-084-R24SB		<10	<10	<10	<10	<10	130	<10	<10	<10	130
			West	144	Brick	White/Light Green	P-085-R24W		<9.9	<9.9	<9.9	<9.9	<9.9	110	<9.9	<9.9	<9.9	110
			North	135	Unpainted plywood													
			Ceiling	240	Bare Lath													
			Door	20		White/Beige	P-256-R24D		<4.4	<4.4	<4.4	<4.4	33 J	27	<4.4	<4.4	<4.4	27
			Floor	240	Gray Painted Concrete													
		24A	East	54	None													
			South	135	Painted plywood	White/Beige	P-097-R24AS		<4.1	<4.1	<4.1	<4.1	<4.1	42	<4.1	<4.1	<4.1	42
			West	54	Brick	White/Light Green	P-098-R24AW		<18	<18	<18	<18	<18	200	<18	<18	<18	200
			North	135	Brick	Beige/ Light Green	P-099-R24AN		<9.8	<9.8	<9.8	<9.8	<9.8	150	<9.8	<9.8	<9.8	150
			Ceiling	90	Drywall		P-100-R24AC		<10	<10	<10	<10	<10	110	<10	<10	<10	110
			Floor	90	Gray Painted Concrete													
		25	East	108	Brick	White/ Light Green/ Maroon	P-086-R25E		<23	<23	<23	<23	<23	300	<23	<23	<23	300
			South	45	Brick		P-087-R25S		<10	<10	<10	<10	<10	90	<10	<10	<10	90
			West	108	Brick													
			North	45	Brick													
			Ceiling	60	Drywall	Beige	P-088-R25CDW		<7.5	<7.5	<7.5	<7.5	<7.5	66	<7.5	<7.5	<7.5	66
			Ceiling	60	Plaster/Lath	Beige	P-089-R25CP	Lab misprinted ID as P-089-R2**S**CP	<4.3	<4.3	<4.3	<4.3	<4.3	56	<4.3	<4.3	<4.3	56
			Door	20		Dark Blue	P-235-R25D		<4.5	<4.5	<4.5	<4.5	<4.5	19	<4.5	<4.5	<4.5	19
			Floor	60	Gray Painted Concrete													
		25A	East	90	Brick	Light Green	P-090-R25AE		<20	<20	<20	<20	<20	350	<20	<20	<20	350
			South	135	Brick	Light Green	P-091-R25AS		<20	<20	<20	<20	<20	380	<20	<20	<20	380
			West	90	Brick													
			North	135	Brick													
			Ceiling	150	Drywall	Beige	P-092-R25ACDW		<4.4	<4.4	<4.4	<4.4	<4.4	37	<4.4	<4.4	<4.4	37
			Ceiling	150	Plaster/Lath	Beige	P-093-R25ACP		<3.8	<3.8	<3.8	<3.8	<3.8	30	<3.8	<3.8	<3.8	30
			Floor	150	Gray Painted Concrete													
		26	East	108	Brick	White	P-101-R26E		<4.5	<4.5	<4.5	<4.5	<4.5	41	<4.5	<4.5	<4.5	41
			South	540	Concrete	White	P-102-R26SC		<4.0	<4.0	<4.0	<4.0	<4.0	80	<4.0	<4.0	<4.0	80
					Brick	White	P-103-R26SB		<4.3	<4.3	<4.3	<4.3	<4.3	36	<4.3	<4.3	<4.3	36
			West	108	CMU (newer), Drywall													
			North	540	CMU	White	P-104-R26N		<3.6	<3.6	<3.6	<3.6	<3.6	42	<3.6	<3.6	<3.6	42
			Ceiling	720	Drywall over lath	White	P-105-R26C		<3.5	<3.5	<3.5	<3.5	<3.5	7.9	<3.5	<3.5	<3.5	7.9
			Floor	720	Gray Painted Concrete													
		27	East	180	Unpainted CMU													
			South	585	CMU	White	P-106-R-27S		<5.0	<5.0	<5.0	<5.0	<5.0	42	<5.0	<5.0	<5.0	42
			West	180	None													
			North	90	CMU	White/Pink	P-107-R27NC		<4.8	<4.8	<4.8	<4.8	<4.8	30	<4.8	<4.8	<4.8	30
			North	495	Brick	White	P-108-R27NB		<3.6	<3.6	<3.6	<3.6	<3.6	50	<3.6	<3.6	<3.6	50
			Ceiling	1,300	None													
			Floor	1,300	Gray Painted Concrete													
		27A	East	180	Brick	Light Green/Red/White	P-109-R27AE		<4.5	<4.5	<4.5	<4.5	<4.5	12	<4.5	<4.5	<4.5	12
			South	45	None													
			West	180	CMU	White	P-110-R27AW		<4.4	<4.4	<4.4	<4.4	<4.4	23	<4.4	<4.4	<4.4	23
			North	45	Brick													
			Ceiling	100	None													
			Floor	100	Gray Painted Concrete													
		28	East	495	Bare wood/ none													
			South	153	Concrete	White	P-111-R28SC		<4.8	<4.8	<4.8	<4.8	<4.8	19	<4.8	<4.8	<4.8	19
					Brick	White	P-112-R28SB		<3.6	<3.6	<3.6	<3.6	<3.6	11	<3.6	<3.6	<3.6	11
			West	495	Concrete	Light Green/Pink/Light Blue	P-113-R28WC		<3.9	<3.9	<3.9	<3.9	<3.9	29	<3.9	<3.9	<3.9	29
					Brick	Light Green/Light Pink	P-114-R28WB		<4.8	<4.8	<4.8	<4.8	<4.8	16	<4.8	<4.8	<4.8	16
			North	153	None													
			Ceiling	935	None													
			Door	20		White/Light Green	P-115-R28D		<4.2	<4.2	<4.2	<4.2	<4.2	27	<4.2	<4.2	<4.2	27
			Floor	935	Unpainted Concrete													

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	Basement	29	East	90	Bare wood													
			South	153	None													
			West	90	Concrete		P-116-29WC		<4.6	<4.6	<4.6	<4.6	<4.6	60	<4.6	<4.6	<4.6	60
					Brick		P-117-29WB		<4.4	<4.4	<4.4	<4.4	<4.4	17	<4.4	<4.4	<4.4	17
			North	153	Concrete		P-119-29NC		<4.5	<4.5	<4.5	<4.5	26	51	<4.5	<4.5	<4.5	77
					Brick	Light Green/Yellow	P-118-29NB		<3.9	<3.9	<3.9	<3.9	43	29	<3.9	<3.9	<3.9	72
			Ceiling	170	None													
			Floor	170	Unpainted Concrete													
		30	East	135	Brick	Light Green/White	P-120-R30E		<4.4	<4.4	<4.4	<4.4	<4.4	170	<4.4	<4.4	<4.4	170
			South	90	None													
			West	135	None													
			North	90	Concrete	Light Green/White	P-121-R30NC		<9.5	<9.5	<9.5	<9.5	<9.5	130	<9.5	<9.5	<9.5	130
					Brick	Light Green/White	P-122-R30NB		<8.8	<8.8	<8.8	<8.8	<8.8	94	<8.8	<8.8	<8.8	94
			Ceiling	150	Drywall over lath	White	P-123-R30C		<4.4	<4.4	<4.4	<4.4	<4.4	31	<4.4	<4.4	<4.4	31
			Floor	150	Gray Painted Concrete													
		31	East	135	None													
			South	135	None													
			West	135	Brick	Dark Green/White	P-124-R31W		<4.7	<4.7	<4.7	<4.7	<4.7	28	<4.7	<4.7	<4.7	28
			North	135	Concrete	White	P-125-R31NC		<22	<22	<22	<22	<22	160	<22	<22	<22	160
					Brick	White	P-132-R31NB		<22	<22	<22	<22	<22	250	<22	<22	<22	250
			Ceiling	225	Unpainted drywall													
			Floor	225	Gray Painted Concrete													
		32	East	135	None													
			South	135	None													
			West	135	None													
			North	135	Concrete/Brick													
			Ceiling	225	Unpainted drywall													
			Floor	225	Gray Painted Concrete													
		33	East	135	Brick	Light Green	P-126-R33E	Misspelled in fig	<23	<23	<23	<23	<23	300	<23	<23	<23	300
			South	135	None													
			West	135	None													
			North	135	Concrete	Light Green/White	P-127-R33NC		<22	<22	<22	<22	<22	310	<22	<22	<22	310
					Brick	Light Green	P-237-R33NB		<24	<24	<24	<24	<24	320	<24	<24	<24	320
			Ceiling	225	Unpainted drywall													
			Floor	225	Gray Painted Concrete													
		34	East	135	Brick	Light Green	P-260-R34E		<20	<20	<20	<20	<20	200	<20	<20	<20	200
			South	90	CMU	White	P-261-R34S		<4.4	<4.4	<4.4	<4.4	<4.4	32	<4.4	<4.4	<4.4	32
			West	135	None													
			North	90	None													
			Ceiling	150	Drywall over lath	White	P-128-R34C		<4.9	<4.9	<4.9	<4.9	<4.9	43	<4.9	<4.9	<4.9	43
			Floor	150	Gray Painted Concrete													
		35	East	135	None													
			South	45	Brick	White/Light Green	P-245-R35S		<25	<25	<25	<25	<25	220	<25	<25	<25	220
			West	135	Brick	White/Light Green	P-129-R35W		<20	<20	<20	<20	<20	180	<20	<20	<20	180
			North	45	None													
			Ceiling	75	Pressed tin over lath	White/ Brown	P-238-R35C		<9.3	<9.3	<9.3	<9.3	<9.3	130	<9.3	<9.3	<9.3	130
			Floor	75	Gray Painted Concrete													
		36	East	135	None													
			South	90	Brick													
			West	135	None													
			North	90	None													
			Ceiling	150	Pressed tin over lath		P-246-R36C		<21	<21	<21	<21	<21	130	<21	<21	<21	130
			Floor	150	Gray Painted Concrete													
		37	East	135	Brick	Light Green	P-130-R37E		<20	<20	<20	<20	<20	400	<20	<20	<20	400
			South	270	Brick	Light Green	P-131-R37S		<24	<24	<24	<24	<24	270	<24	<24	<24	270
			West	135	None													
			North	270	None													
			Ceiling	450	Pressed tin over lath	White/Brown	P-241-R37C		<3.5	<3.5	<3.5	<3.5	<3.5	65	<3.5	<3.5	<3.5	65
			Floor	450	Gray Painted Concrete													

Table 2A
PCB Paints and Coatings Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Exterior	N/A	Front Entrance - Surround		50	Wood	White painted	P-169-Ex		<0.47	<0.47	<0.47	<0.47	<0.47	1.8	<0.47	<0.47	<0.47	1.8
							P-170-Ex		<0.48	<0.48	<0.48	<0.48	<0.48	1	<0.48	<0.48	<0.48	1
							P-171-Ex		<0.49	<0.49	<0.49	<0.49	<0.49	1.7	<0.49	<0.49	<0.49	1.7
		Front Entrance - Door		64	Wood	Dark Green painted	P-178-Ex		<0.93	<0.93	<0.93	<0.93	<0.93	2.4	<0.93	<0.93	<0.93	2.4
							P-179-Ex		<0.97	<0.97	<0.97	<0.97	<0.97	1.8	<0.97	<0.97	<0.97	1.8
							P-180-Ex		<0.92	<0.92	<0.92	<0.92	<0.92	3	<0.92	<0.92	<0.92	3
		Front Entrance		100	Concrete	White painted	P-203-Ex	No white paint on front exterior except for 1916 cornerstone	<0.089	<0.089	<0.089	<0.089	<0.089	0.5	<0.089	<0.089	<0.089	0.5
		North basement stairwell		200	Concrete	Multi-color painted	P-172-Ex		<900	<900	<900	<900	<900	9,700	<900	<900	<900	9,700
							P-173-Ex		<1,400	<1,400	<1,400	<1,400	<1,400	7,100	<1,400	<1,400	<1,400	7,100
							P-174-Ex		<3,400	<3,400	<3,400	<3,400	<3,400	20,000	<3,400	<3,400	<3,400	20,000
		Front Steps Handrails		40 LF	Metal	Black painted	P-181-Ex		<2.3	<2.3	<2.3	<2.3	11	11	<2.3	<2.3	<2.3	22
							P-182-Ex		<2.0	<2.0	<2.0	<2.0	8.8	12	<2.0	<2.0	<2.0	20.8
							P-183-Ex		<2.1	<2.1	<2.1	<2.1	13	12	<2.1	<2.1	<2.1	25
		Window Frames		80	Wood	White painted	P-175-Ex		<0.43	<0.43	<0.43	<0.43	<0.43	1.8	<0.43	<0.43	<0.43	1.8
							P-176-Ex		<0.47	<0.47	<0.47	<0.47	<0.47	0.6	<0.47	<0.47	<0.47	0.6
							P-177-Ex		<0.47	<0.47	<0.47	<0.47	<0.47	0.72 J	<0.47	<0.47	<0.47	0.7
		Window Sashes		80	Wood	Dark Green painted	P-262-Ex		<3.6	<3.6	<3.6	<3.6	<3.6	70	<3.6	<3.6	<3.6	70
							P-263-Ex		<8.7	<8.7	<8.7	<8.7	<8.7	160	<8.7	<8.7	<8.7	160
							P-264-Ex		<4.1	<4.1	<4.1	<4.1	<4.1	180	<4.1	<4.1	<4.1	180
		Ceiling of North central roof over steps		150	Wood	White painted	P-166-Ex		<0.95	<0.95	<0.95	<0.95	<0.95	5.7	<0.95	<0.95	<0.95	5.7
							P-167-Ex		<0.96	<0.96	<0.96	<0.96	<0.96	4.5	<0.96	<0.96	<0.96	4.5
							P-168-Ex		<0.46	<0.46	<0.46	<0.46	<0.46	1	<0.46	<0.46	<0.46	1
		Roof Edge Trim/Soffits		400	Wood	White/gray painted	P-190-Ex		<0.45	<0.45	<0.45	<0.45	<0.45	1.1 J	<0.45	<0.45	<0.45	1.1
							P-191-Ex		<0.44	<0.44	<0.44	<0.44	<0.44	1	<0.44	<0.44	<0.44	1
							P-192-Ex		<0.41	<0.41	<0.41	<0.41	<0.41	1.7	<0.41	<0.41	<0.41	1.7
		Southwest Loading Ramp		600	Concrete	Gray painted	P-184-Ex		<200	<200	<200	<200	<200	7,500	<200	<200	<200	7,500
							P-185-Ex		<230	<230	<230	<230	<230	7,700	<230	<230	<230	7,700
							P-186-Ex		<220	<220	<220	<220	<220	9,600	<220	<220	<220	9,600
		Southwest Loading Ramp Roof		300	Wood Trim/Soffit/Door & Sheet Metal walls	White painted	P-187-Ex		<4.3	<4.3	<4.3	<4.3	<4.3	38	<4.3	<4.3	<4.3	38
							P-188-Ex		<8.1	<8.1	<8.1	<8.1	<8.1	110	<8.1	<8.1	<8.1	110
							P-189-Ex		<21	<21	<21	<21	<21	360	<21	<21	<21	360
		East concrete window sills under green painted sashes		N/A	Concrete	Not painted	P-299-Ex		<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	--
							P-300-Ex		<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	--
							P-301-Ex		<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	--
		North concrete window sills under green painted sashes		N/A	Concrete	Not painted	P-302-Ex		<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	--
							P-303-Ex		<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	--
							P-304-Ex		<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	--
		South concrete window sills under green painted sashes		N/A	Concrete	Not painted	P-332-Ex		<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	--
							P-333-Ex		<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	--
							P-334-Ex		<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	--

Notes:
Adapted from Target Brownfields Assessment Hazardous Building Materials Assessment, KGSNE, 10-Jan-24
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling* , 2023
LF = linear feet
SF = square feet
'--' = indicates all results for that sample were non-detect.
All results reported in ppm
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the samples.
Red shading indicates the material did not exist
Tan shading indicates the material contains a total PCB concentration over 50 ppm
Gray shading indicates the material was not selected to be sampled in the original sample plan by Atlas. The materials are still shown in the Atlas Workplan tables and were carried over for continuity.

Table 2B
PCB Bulk Material Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

KGSNE Sample ID	Material Type / Material ID	Material Description	Material Location	Quantity of Material	Location(s) of Samples	Arolclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total Aroclors
	Caulk / #1	Caulk bead – characteristics unknown	Exterior - Between back edge of soffit and brick wall; north and south sides of building; a portion is hanging down on north side	70 LF	North side of building										
				70 LF	South side of building										
P-275-Ex	Caulk / #2	White	Exterior – Roofline intersection (sloping portion) between east and west portions of building, at top of metal flashing and in joint between roof and wall.	30 LF	North side of building	<0.70	<0.70	<0.70	<0.70	<0.70	5.9	<0.70	<0.70	<0.70	5.9
P-276-Ex						<3.6	<3.6	<3.6	<3.6	<3.6	17	<3.6	<3.6	<3.6	17
P-277-Ex						<3.7	<3.7	<3.7	<3.7	<3.7	10	<3.7	<3.7	<3.7	10
P-278-Ex	Caulk / #3	White	Exterior – Small roof over southwest loading ramp roofline intersection with brick wall, at top of metal flashing.	10 LF	Southwest side of building over loading ramp	<0.77	<0.77	<0.77	<0.77	<0.77	1.4	<0.77	<0.77	<0.77	1.4
P-279-Ex						<0.76	<0.76	<0.76	<0.76	<0.76	1.6	<0.76	<0.76	<0.76	1.6
P-280-Ex						<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	-
	Caulk (if present) / #4	Characteristics Unknown	Exterior – Small roof over central steps to basement; at roofline intersection with brick wall.	15 LF	Small roof over north central stair to basement										
P-281-Ex	Caulk / #5	White	Chimney – Copper Flashing – along top edge	1 LF	Chimney	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	-
P-282-Ex						<0.73	<0.73	<0.73	<0.73	<0.73	0.8	<0.73	<0.73	<0.73	0.8
P-283-Ex						<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	-
P-284-R6	Celotex board / #14	Brown fibrous board	Room 6 (loose panels), Room 10 (walls of closet). Collect samples of unpainted material.	100 SF	Room 6 (loose panels), Room 10 (walls of closet)	<0.89	<0.89	<0.89	<0.89	<0.89	2.6	<0.89	<0.89	<0.89	2.6
P-285-R6						<0.98	<0.98	<0.98	<0.98	<0.98	2.2 J	<0.98	<0.98	<0.98	2.2
P-286-R10						<0.90	<0.90	<0.90	<0.90	<0.90	1.6	<0.90	<0.90	<0.90	1.6
	Black Paper / #19	Black	Room 5, behind wood paneling? (observed in gap between window trim and paneling)	Up to 480 SF	Room 5										
P-287-R13	Beige Mastic / #24	Beige	Room 13, 14, on wood floor	284 SF	Room 13, 14	<0.96	<0.96	<0.96	<0.96	<0.96	4.3	<0.96	<0.96	<0.96	4.3
P-288-R13						<0.88	<0.88	<0.88	<0.88	<0.88	2.2	<0.88	<0.88	<0.88	2.2
P-289-R14						<2.0	<2.0	<2.0	<2.0	<2.0	11	<2.0	<2.0	<2.0	11
P-290-R12	Carpet Mastic / #26	Remnant carpet mastic	Room 12, remnant carpet fibers on wood floor	Up to 360 SF	Room 12	<0.93	<0.93	<0.93	<0.93	<0.93	3.3	<0.93	<0.93	<0.93	3.3
P-291-R12						<0.74	<0.74	<0.74	<0.74	<0.74	2.7	<0.74	<0.74	<0.74	2.7
P-292-R12						<0.97	<0.97	<0.97	<0.97	<0.97	3.4	<0.97	<0.97	<0.97	3.4
P-293-R18	Black Mastic / #28	Black, VCT mastic	Room 18, on underside of VFT	340 SF	Room 18	<970	<970	<970	<970	<970	5,700	<970	<970	<970	5,700
P-294-R18						<800	<800	<800	<800	<800	4,600	<800	<800	<800	4,600
P-295-R18						<960	<960	<960	<960	<960	6,800	<960	<960	<960	6,800
P-296-R15	Old Linoleum Mastic / #33	Unknown	Room 15, may be present beneath old “Battleship” linoleum	75 SF	Room 15	<0.93	<0.93	<0.93	<0.93	<0.93	7.6	<0.93	<0.93	<0.93	7.6
P-297-R15						<0.93	<0.93	<0.93	<0.93	<0.93	13	<0.93	<0.93	<0.93	13
P-298-R15						<0.90	<0.90	<0.90	<0.90	<0.90	12	<0.90	<0.90	<0.90	12

Notes:
Adapted from Target Brownfields Assessment Hazardous Building Materials Assessment, KGSNE, 10-Jan-24
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling* , 2023
LF = linear feet
SF = square feet
All results reported in ppm
Red shading indicates the material did not exist
Tan shading indicates the material contains a total PCB concentration over 50 ppm
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the samples.

Table 2C
PCB Soil Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Boring ID	KGSNE Sample ID	Depth (Ft. bgs)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
SUBSLAB SOIL SAMPLES												
P-269	P-269-R23SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-270	P-270-R27SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-271	P-271-R25ASS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-272	P-272-R21SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-273	P-273-R31SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
EXTERIOR SOIL SAMPLES												
P-305-Ex	P-305-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-306-Ex	P-306-Ex-000.5	0 - 0.5	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	--
P-307-Ex	P-307-Ex-000.5	0 - 0.5	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	--
P-308-Ex	P-308-Ex-000.5	0 - 0.5	<0.090	<0.090	<0.090	<0.090	<0.090	0.22	<0.090	<0.090	<0.090	0.22
	P-308-Ex-0.501	0.5 - 1	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-309-Ex	P-309-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-310-Ex	P-310-Ex-000.5	0 - 0.5	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	--
P-311-Ex	P-311-Ex-000.5	0 - 0.5	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	--
P-312-Ex	P-312-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-313-Ex	P-313-Ex-000.5	0 - 0.5	<0.090	<0.090	<0.090	<0.090	<0.090	0.13	<0.090	<0.090	<0.090	0.13
	P-313-Ex-0.501	0.5 - 1	<0.083	<0.083	<0.083	<0.083	<0.083	0.15	<0.083	<0.083	<0.083	0.15
	P-313-Ex-0101.5	1 - 1.5	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	--
P-314-Ex	P-314-Ex-000.5	0 - 0.5	<0.093	<0.093	<0.093	<0.093	<0.093	0.29 J	<0.093	<0.093	<0.093	0.29
	P-314-Ex-0.501	0.5-1	<0.087	<0.087	<0.087	<0.087	<0.087	0.10	<0.087	<0.087	<0.087	0.10
P-315-Ex	P-315-Ex-000.5	0 - 0.5	<0.45	<0.45	<0.45	<0.45	<0.45	1.3 J	3.1	<0.45	<0.45	4.4
	P-315-Ex-0.501	0.5 - 1	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	1.3	<0.085	<0.085	1.3
	P-315-Ex-0101.5	1 - 1.5	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	0.097	<0.087	<0.087	0.097
P-316-Ex	P-316-Ex-000.5	0 - 0.5	<0.090	<0.090	<0.090	<0.090	<0.090	0.32	<0.090	<0.090	<0.090	0.32
	P-316-Ex-0.501	0.5 - 1	<0.086	<0.086	<0.086	<0.086	<0.086	0.11	<0.086	<0.086	<0.086	0.11
P-317-Ex	P-317-Ex-000.5	0 - 0.5	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	--
P-318-Ex	P-318-Ex-000.5	0 - 0.5	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	--
P-319-Ex	P-319-Ex-000.5	0 - 0.5	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	--
P-320-Ex	P-320-Ex-000.5	0 - 0.5	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	--
P-321-Ex	P-321-Ex-000.5	0 - 0.5	<0.080	<0.080	<0.080	<0.080	<0.080	0.36	<0.080	<0.080	<0.080	0.36
	P-321-Ex-0.501	0.5 - 1	<0.083	<0.083	<0.083	<0.083	<0.083	0.20	<0.083	<0.083	<0.083	0.20
P-322-Ex	P-322-Ex-000.5	0 - 0.5	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	--
P-323-Ex	P-323-Ex-000.5	0 - 0.5	<0.085	<0.085	<0.085	<0.085	<0.085	0.52	<0.085	<0.085	<0.085	0.52
	P-323-Ex-0.501	0.5 - 1	<0.083	<0.083	<0.083	<0.083	<0.083	0.23	<0.083	<0.083	<0.083	0.23
P-324-Ex	P-324-Ex-000.5	0 - 0.5	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	--
P-325-Ex	P-325-Ex-000.5	0 - 0.5	<0.083	<0.083	<0.083	<0.083	<0.083	0.096	<0.083	<0.083	<0.083	--
P-326-Ex	P-326-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	0.17	<0.084	<0.084	<0.084	0.17
	P-326-Ex-0.501	0.5 - 1	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	--
P-327-Ex	P-327-Ex-000.5	0 - 0.5	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	--
P-328-Ex	P-328-Ex-0606.5	6 - 6.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--

Notes:
Adapted from Target Brownfields Assessment Hazardous Building Materials Assessment, KGSNE, 10-Jan-24
All results reported in ppm
The intervals at the end of the KGSNE Sample ID correspond to the depth interval, in feet (eg 000.5 corresponds to 0-0.5 interval)
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the samples.

Table 2D
Lead Waste Characterization Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-20C (note-historic sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-16D (note-historic sample location unknown, sample grey floor paint)	
	Interior	1st floor	15	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R15S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-023-R06F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-188-Ex (Note-sample white painted wood trim)	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Drk. Grey	P-051-R18NC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	
	Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	
	Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-056-R20NC	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-058-R21EB	28
	Interior	Basement	21	West	Brick	Blue/Lt. Green	P-094-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-086-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-080-R22SPW	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green - high	P-265-R17EC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-031-R09S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-190-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell 0-1	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Behind wall paneling in Room 5	Gray adhesive associated with brown, faux wood wall paneling	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	silver paint associated with metal roofing	Tin	Silver	A-022a	

Notes:
Adapted from Target Brownfields Assessment Hazardous Building Materials Assessment, KGSNE, 10-Jan-24
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling*, 2023
mg/L = milligrams per liter

Table 2E
Asbestos Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Medium/ Area	Material ID	Material & Description	Material Location(s)	Quantity	Recommended Sample Locations	KGSNE Sample ID	Asbestos Percent Type
Caulking	1	Black caulk	Exterior; Between back edge of soffit and brick wall below; north and south sides of building	175 LF	Roofline - north side		
	2	White caulk	Exterior; Roofline intersection (sloping portion) between east and west portions of building, at top of metal flashing and in joint between roof and wall	20 LF	Roofline - north side	A-023a	2% Chrysotile
						A-023b	Positive Stop
	3	Flashing caulk	Exterior; Small roof over southwest loading ramp roofline intersection with brick wall, at top of metal flashing	20 LF	SW Corner Ramp Roof	A-021a	2% Chrysotile
						A-021b	Positive Stop
						A-021c	Positive Stop
	4	Caulk (if present)	Over central stair to basement; roofline intersection with brick wall	20 LF	Small roof over north central stair to basement		
	5	Light gray horizontal caulk	Roof - chimney	10 LF	Roof - chimney	A-024a	3% Chrysotile
						A-024b	Positive Stop
	6	Yellow caulking around interior door trim	Room 17 (gym) between exit door frame and interior brick, north side of gym	20 LF	Room 17 (gym)	A-016a-R17	--
						A-016b-R17	--
Roofing	7	Asphalt shingle	Eastern end of western portion of building - upper wall on roof level adjacent to flat roof - under slate wall shingles	200 SF	At material location	A-025a	--
						A-025b	--
	8 & 9	Roof paper (brown & black [tar])	Eastern end of western portion of building - upper wall on roof level adjacent to flat roof - under slate wall shingles	200 SF	At material location	A-026a	--
						A-026b	--
						A-045a	--
						A-045b	--
	10	Material(s) (including tar paper) that may be present under gambrel slate	Gambrel roof - under slate	~6,000 SF	Gambrel roof - top. Conduct exploratory work under slate.	A-027a	10% Chrysotile
		Built up tar paper				A-027b	Positive Stop
	10a	asphalt layer				A-028a	6% Chrysotile
						A-028b	Positive Stop
	10b	rubber roofing membrane				A-029a	--
						A-029b	--
	10c	fiberboard				A-030a	--
						A-030b	--
	11	Rubber roofing adhesive	Throughout flat roof, eastern portion of building, seams, corners, various locations	100 SF	Flat roof, eastern portion of building		
	12	Rubber roofing patch adhesive - if present	Flat roof, eastern portion of building, patches (if present)	20 SF	Flat roof, eastern portion of building	A-031a	--
						A-031b	--
						A-031c	--
	13	Asphalt roof repair sheeting	North side of gambrel roof	~2,000 SF	Gambrel roof - north side		
Interior	14	Celotex board	Rooms 6 (loose panels), 10 (walls of closet)	100 SF	Room 6, 10	A-002a-R10	--
						A-002b-R06	--
	15	Thin wall panels	Room 10, 16	~700 SF	Room 10, 16	A-003a-R10	--
						A-003b-R16	--
	16	Ceiling panels, if not wood/plywood	Room 17 (gym)	~6,000 SF	Room 17	A-032a	--
						A-032b	--
	17	Insulation, if any, behind ceiling panels	Room 17 (gym)	~6,000 SF	Room 17		
	18	Wood paneling - backing paper	Room 5	480 SF	Room 5		
	19	Black paper (L side of middle window below sill)	Room 5, behind wood paneling (observed in gap between window trim and paneling)	Up to 480 SF	Room 5		

Table 2E
Asbestos Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Medium/ Area	Material ID	Material & Description	Material Location(s)	Quantity	Recommended Sample Locations	KGSNE Sample ID	Asbestos Percent Type
Interior	20	Drywall	Walls, ceilings, in-fill panels, around ductwork. Throughout building. Sometimes multiple layers. Includes rooms: 3, 6, 7, 12, 13, 14, 17, 18, 20, 21, 25, 26, 23/24 hallway, 27/bathroom hallway, 28, 30-37 hallway; 30, 31, 32, 33, 34, 35, 36, 37, basement stairs	~6,400 SF	Rooms 3, 7, 12, 14, 18, 21, 34 (2 samples in each room)	A-017a-R03	--
						A-017b-R03	--
						A-039a-R07	--
						A-039b-R07	--
						A-040a-R12	--
						A-040b-R12	--
						A-041a-R14	--
						A-041b-R14	--
						A-042a-R18	--
						A-042b-R18	--
						A-043a-R21	--
						A-043b-R21	--
						A-044a-R34	--
						A-044b-R34	--
	21	Joint compound	Rooms 6, 7, 12, 13, 14, 26, basement stair landing (where drywall is painted)	~900 SF	Room 6, 7, 14	A-020a-R06	2% Chrysotile
						A-020b-R06	Positive Stop
						A-035a-R07	2% Chrysotile
						A-035b-R07	Positive Stop
						A-036a-R12	--
						A-036b-R12	--
						A-037a-R14	--
						A-037b-R14	--
						A-038a-R28	--
						A-038b-R28	--
	22	Joint compound	Room 3 (patch)	5 SF	Room 3 (all samples)		
	23	Sprinkler fitting thread sealant	Room 20, 21, 26 (closet)	<1 SF, several	Room 20, 21	A-012a-R20	--
						A-012b-R21	--
	24	Beige mastic	Room 13, 14, on wood floor	284 SF	Room 13, 14	A-014a-R13	--
						A-014b-R14	--
	25	White sub-floor plaster-like filler	Room 14, under wood floor	Max 230 SF	Room 14	A-005a-R14	--
						A-005b-R14	--
	26	Carpet mastic	Room 12, remnant fibers on wood floor	Max 360 SF	Room 12	A-015a-R12	--
						A-015b-R12	--
	27	Yellow mastic	Room 22, 27, 30-37, on concrete	~3,900 SF	Room 22, 27	A-001a-R22	--
						A-001b-R27	--
	28	Black mastic	Room 18, on underside of VFT	340 SF	Room 18	A-013a-R18	10% Chrysotile
						A-013b-R18	Positive Stop
	29	Leveling compound	Room 27, 34	80 SF	Room 27, 34	A-011a-R34	--
						A-011b-R27	--
						A-011c-R27	--
	30	Ceramic Tile thinset	Room 23, floor	100 SF	Room 23	A-010a-R23	--
						A-010b-R23	--
	31	Ceramic Tile grout	Room 23, floor	100 SF	Room 23	A-004a-R23	--
						A-004b-R23	--
	32	Ceramic Tile	Room 23, floor	100 SF	Room 23	A-009a-R23	--
						A-009b-R23	--
		Materials, if any, beneath Ceramic Tile	Room 23, floor	100 SF	Room 23		
	33	Gray battleship linoleum	Room 15	75 SF	Room 15	A-007a-R15	--
						A-007b-R15	--
		Brown mastic assoc. with old "Battleship" linoleum				A-008a-R15	--
						A-008b-R15	--

Table 2E
Asbestos Sample Results
2023 Targeted Brownfield Analysis
St. Johnsbury Armory
St. Johnsbury, VT

Medium/ Area	Material ID	Material & Description	Material Location(s)	Quantity	Recommended Sample Locations	KGSNE Sample ID	Asbestos Percent Type
Exterior		Foundation Waterproofing	Exterior of foundation	Unknown	Exterior of foundation		
		Materials behind brick façade, if any (paper, mastic, insulation)	Behind brick façade	Unknown	3 samples of each identified material		
Additional KGSNE Samples	N/A	Gray adhesive associated with brown, faux wood wall paneling	Behind wall paneling in Room 5		Room 5	A-006a-R5	5% Chrysotile
						A-006b-R5	Positive Stop
						A-006c-R5	Positive Stop
	N/A	Brick mortar	Exterior on all sides		N/A	A-018a-N	--
						A-018b-W	--
						A-018c-S	--
	N/A	Concrete Slab in basement	N/A		Room 32	A-019a-R32[1]	--
					Room 37	A-019b-R37	--
					Room 28	A-019c-R28	--
	N/A	Silver paint associated with metal roofing; Reference Material #3	Exterior; Southwest loading dock		N/A	A-022a	3% Chrysotile
						A-022b	Positive Stop
						A-022c	Positive Stop
	N/A	Gray caulking on east facing window of patch roof; Reference Material #8 & 9	Exterior		N/A	A-033a	--
						A-033b	--
	N/A	Built up roofing under flat roof (#12)	Exterior		N/A	A-034a	2% Chrysotile
						A-034b	Positive Stop

Notes:
Adapted from Target Brownfields Assessment Hazardous Building Materials Assessment, KGSNE, 10-Jan-24
1. Sample was labeled A-019a-R23 in the field but was collected from Room 32.
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling*, 2023
LF = linear feet
SF = square feet
'--' = indicates the results for that sample were non-detect.
Red shading indicates the material did not exist

Table 2F
PCB Waste Characterization Sample Results
St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	Eastern Analytical Sample ID	Sample Date	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
01162415979.801	273015.01	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.802	273015.02	1/16/2024	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
01162415979.803	273015.03	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.804	273015.04	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.805	273015.05	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.806	273015.06	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.807	273015.07	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--
01162415979.808	273015.08	1/16/2024	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	--

Notes:
All results reported in micrograms per liter (ug/L)
'--' - Indicates that the Total PCBs result for a given sample were non-detect
<(Number) - Result was not detected above the reported MDL
MDL - Method Detection Limit - the lowest quantitative threshold
Detection limits displayed are elevated In response to a lower intial volume used for analysis.

Table 3 Sample Design - Post-Remediation PCB Building Material Samples
St. Johnsbury Armory Redevelopment Project
1249 Main Street
St. Johnsbury, Vermont

Location		Sample ID	Matrix	Notes
Floor	**Room**			
Second (Level 2)	3	03-1-Wd	Wood	Wood floor joist below brown hardwood floor near stairwell
		03-2-Wd	Wood	Wood floor joist below brown hardwood floor near beige door
		03-3-Wd	Wood	Wood floor joist below brown hardwood floor
	4	04-1-Wd	Wood	Wood floor joist below brown hardwood floor near beige door
		04-2-Wd	Wood	Wood floor joist below brown hardwood floor
		04-3-Wd	Wood	Wood floor joist below brown hardwood floor
	5	05-1-Wd	Wood	Wood floor joist below brown hardwood floor
		05-2-Wd	Wood	Wood floor joist below brown hardwood floor near robin egg blue door
		05-3-Wd	Wood	Wood floor joist below brown hardwood floor
	8	08-1-Wd	Wood	Wood floor joist below brown hardwood floor
	9	09-1-Wd	Wood	Wood floor joist below brown hardwood floor near blue/white plaster lathe
	10	10-1-Wd	Wood	Wood floor joist below brown hardwood floor
First (Level 1)	17	17-1-Pl	Plaster	Plaster wall
		17-2-Pl	Plaster	Plaster wall
Basement (Level 0)	18	18-1-C	Concrete	Concrete basement wall near prior sample P-048-R18E
		18-2-C	Concrete	Concrete basement wall near prior sample P-051-R18NC
	20	20-1-C	Concrete	Concrete basement wall near prior sample P-056-R20NC
		20-2-Br	Brick	Brick basement wall near prior sample P-053-R20E
		20-3-Br	Brick	Brick basement wall
		20-4-Br	Brick	Brick basement wall near prior sample P-054-R20W
	21	21-1-C	Concrete	Concrete basement wall
		21-2-C	Concrete	Concrete basement wall near prior sample P-057-R21EC
		21-3-Br	Brick	Brick basement wall near prior sample P-059-R21S
		21-4-Br	Brick	Brick basement wall near prior sample P-094-R21W
	22	22-1-Br	Brick	Brick basement wall
		22-2-C	Concrete	Concrete basement wall near prior sample P-069-R22EC
		22-3-Br	Brick	Brick basement wall near prior sample P-081-R22SB
		22-4-Br	Brick	Brick basement wall near prior sample P-071-R22WB
	23	23-1-C	Concrete	Concrete basement wall near prior sample P-074-R23EC
	24	24-1-C	Concrete	Concrete basement wall near prior sample P-083-R24SC
		24-2-C	Concrete	Concrete basement wall near prior sample P-085-R24W
	24A	24A-1-Br	Brick	Brick basement wall near prior sample P-099-R24AN
	25	25-1-C	Concrete	Concrete basement wall
		25-2-C	Brick	Brick basement wall near prior sample P-086-R25-E
	26	26-1-Br	Brick	Brick basement wall near prior sample P-101-R26E
		26-2-C	Concrete	Concrete basement wall
	27	27-1-C	Concrete	Concrete basement wall near P-102-R26SC
	33	33-1-Br	Brick	Brick basement wall near P-237-R33NB
	Stairwell	SW-1-Pl	Plaster	Plaster on stairwell wall near prior sample P-064-S01S
Quality Control Samples				
		FD-XX	Field Duplicate	One per 10 samples per matrix
		same as parent	MS/MSD	One per 20 samples per matrix
		EB-XX	Equipment Blank	One sample per piece of non-dedicated sampling equipment used

Notes

Br = Brick

C = Concrete

MS/MSD = Matrix Spike/Matrix Spike Duplicate

PCBs = Polychlorinated Biphenyls

Pl = Plaster

1. Samples will be submitted for PCB analysis utilizing extraction method 3546 determinative method 8082A
2. Wall samples shall be collected approximately mid-way between floor and ceiling

Table 4 Sample Design - PCB Excavation Verification Samples
St. Johnsbury Armory Redevelopment Project
1249 Main Street
St. Johnsbury, Vermont

Location / Sample ID[1]	Estimated Sample Location Depth (ft bgs)	Matrix	Rationale	Laboratory Analysis
				PCBs (8082)
C-1-S	1.5	Soil	Evaluate soil conditions in former boiler room	1
C-2-S	1.5	Soil	Evaluate subslab soil conditions near floor drain	1
C-3-S	1.5	Soil	Evaluate subslab soil conditions near floor drain	1
Quality Control Samples				
FD-01		Soil	Field Duplicate	1
same as parent		Soil	MS/MSD	1
EB-01		Water	Equipment Blank	See Note 2

Notes

ft bgs = feet below ground surface

C = Excavation Area C

MS/MSD = Matrix Spike/Matrix Spike Duplicate

PCBs = Polychlorinated Biphenyls

S = Soil

1. Sample locations subject to change based on site conditions

2. Sample will be collected for each piece of non-dedicated sampling equipment used

Appendix A – Project Schedule

ST. JOHNSBURY ARMORY PROJECT SCHEDULE

Last Update: 02/02/24

DESCRIPTION OF ACTIVITIES & DELIVERABLES	ANTICIPATED START DATE	ANTICIPATED END DATE	2023						2024													2025							
			July '23	Aug '23	Sept '23	Oct '23	Nov '23	Dec '23	Jan '24	Feb '24	Mar '24	April '24	May '24	June '24	Jul '24	Aug "24	Sept '24	Oct '24	Nov '24	Dec '24	Jan '25	Feb '25	Mar '25	April '25	May '25	June '25	Jul '25	25-Aug	25-Sep
ENVIRONMENTAL																												
CLEANUP PLANNING																												
PCB Remediation Concept Coordination Call with EPA	12/08/23	12/08/23																										
Abatement & PCB Remediation Work Plan																												
Prepare Abatement & PCB Remediation Work Plan	11/28/23	01/26/24																										
Submit Draft Plan for Town Review	01/26/24	02/01/24																										
Revise Plan per Town Comments	02/01/24	02/02/24																										
Submit Revised Plan for EPA Review	02/02/24	02/16/24																										
Revise Plan per EPA Comments	02/19/24	02/23/24																										
Submit Final Plan for EPA Approval	02/26/24	02/26/24																										
Update Site-Specific QAPP																												
Update and submit concurrent with Abatement and Remediation	12/11/23	02/02/24																										
Abatement Specifications & Bid Documents																												
Prepare Contract Documents	12/01/23	03/01/24																										
Submit Contract Documents for Town Review	03/04/24	03/08/24																										
Revise Contract Documents per Town Comments	03/11/24	03/15/24																										
Submit Revised Contract Documents for EPA/DEC Review	03/18/24	03/29/24																										
Revise Contract Documents per Agency comments and issue as Final	04/01/24	04/05/24																										
Advertise for Bids, Conduct Pre-Bid Meeting, Contractor Selection	04/08/24	04/30/24																										
STAKEHOLDER ENGAGEMENT																												
Develop Outreach Materials (as needed)																												
Public Meetings (as needed)																												
SITE CLEANUP & ABATEMENT OVERSIGHT																												
CAP Implementation, Abatement & PCB Remediation																												
Town executes Agreement with Selected Contractor	05/01/24	05/17/24																										
Pre-Construction Meeting	05/20/24	05/20/24																										
Montrose HASP	04/01/24	04/05/24																										
Contractor Submittals	05/21/24	06/07/24																										
Construction Activities, Observation, CAMP & Contractor Payment	06/10/24	09/23/24																										
Project Updates During Construction (Weekly Progress Reports)	06/10/24	09/23/24																										
Confirmatory Sampling (Collect & Analyze PCB Samples)	06/10/24	09/23/24																										
Cleanup Documentation																												
Contractor Punchlist, Closeout Documentation and Final Invoice	09/23/24	10/07/24																										
PCB Cleanup Completion Report to EPA (includes review/revision/finalization)	10/07/24	01/30/25																										
CAP Completion Report to VTDEC (includes review/revision/finalization)	10/07/24	12/30/24																										
Institutional Control Plan (includes review/revision/finalization)	10/07/24	11/27/24																										
Vermont Asbestos Final Report	10/07/24	11/27/24																										
GRANT MANAGEMENT & REPORTING																												
Project Check-in Meetings																												
Biweekly Consultant Team Meetings	07/01/23	7/31/2025																										
Monthly Regulatory Agency Meetings	07/01/23	7/31/2025																										
Compliance Reporting to EPA																												
ACRES Database Updates	06/01/23	07/31/25																										
Quarterly Progress Reports	06/01/23	07/31/25																										
Annual DBE Utilization Report	10/01/23	09/30/25																										
Annual Federal Financial Report	10/01/23	09/30/25																										
Davis-Bacon Act Prevailing Wage Audits	06/10/24	12/31/24																										
Final Performance Report	07/01/25	09/30/25																										
Final DBE Utilization Report	07/01/25	09/30/25																										
Final Federal Financial Report	07/01/25	09/30/25																										
Compliance/Closeout Reporting to ACCD	07/01/25	09/30/25																										
DEMO, CONSTRUCTION & OCCUPANCY																												
DEMO AND CONSTRUCTION																												
Mobilization, Demo and Construction	09/10/24	12/30/24																										
MOVE IN AND BUILDING OCCUPANCY																												
FF&E Move-in and Setup	07/10/24	6/31/25																										
Building Occupancy		08/07/25																										

ASSUMPTIONS:

Schedule assumes estimated Town and Agency review timeframes as indicated.

Schedule assumes one round of Town and Agency review comments will be required for all Deliverables to be issued as final.

Remediation Timeframe of three months is for informational purposes and is contingent upon Contractor's construction schedule to be submitted at the time of bidding.

Appendix B – Historical Sampling Reports

Environmental Survey



Former Saint Johnsbury Armory
1249 Main Street
Saint Johnsbury, Vermont

Prepared for:

Ms. Gail Aloisio
Northeastern Vermont Development Association
36 Eastern Avenue, Suite 1
PO Box 630
St. Johnsbury, Vermont 05819

Prepared by:

Cardno ATC
171 Commerce Street, P.O. Box 1486
Williston, VT 05401

Cardno ATC Project No. 063.35078.0013

March 28, 2013

Table of Contents

1.0 BACKGROUND 1
2.0 FINDINGS 1
2.1 ASBESTOS SURVEY 1
2.1.1 Asbestos Quality Assurance/Quality Control 2
2.1.2 Asbestos Recommendations 2
2.2 PCB IN BUILDING MATERIALS SURVEY 3
2.2.1 PCB Quality Assurance/Quality Control 3
2.2.2 PCB Recommendations 3
2.3 LEAD BASED PAINT XRF SURVEY 3
2.3.1 Lead in Paint Quality Assurance/Quality Control 4
2.3.2 Lead in Paint Recommendations 4
2.4 LEAD IN DUST SAMPLING 5
2.4.1 Lead in Dust Quality Assurance/Quality Control 7
2.4.2 Lead in Dust Recommendations 7
2.5 Indoor Air Quality Investigation 7
2.5.1 IAQ Quality Assurance/Quality Control 10
2.5.2 IAQ Recommendations 10
2.6 SEDIMENT SAMPLING AND DYE TEST 10
2.6.1 Sediment Sampling Quality Assurance/Quality Control 11
2.6.2 Sediment Sampling and Dye Test Recommendations 11

Appendices

Site Diagram

Appendix A: Asbestos Sample Location Diagram
List of Suspect Asbestos-Containing Materials
Asbestos Laboratory Report
Appendix B: PCB Sample Location Diagram
List of Suspect PCB-Containing Materials
PCB Laboratory Report
Appendix C: Building Diagram with Room Numbers
XRF Field Sheets
XRF Protocol
Performance Characteristic Sheet
XRF QA/QC Results
Appendix D: Lead in Dust Sample Location Diagram
Lead in Dust Laboratory Report
Appendix E: Indoor Air Quality Sample Location Diagram
Indoor Air Quality Laboratory Reports
Appendix F: Diagram of Floor Drains and Sediment Sample Location
Sediment Sample Laboratory Reports

1.0 BACKGROUND

The following report documents the asbestos, polychlorinated biphenyls (PCBs), lead based paint (LBP), lead in dust, indoor air quality (IAQ), drain sediment sampling performed at the former Saint Johnsbury Armory facility, located at 1249 Main Street (the site) in Saint Johnsbury, Vermont. In addition the report documents the dye-testing results of the basement floor drain system.

The site is currently developed with the former St. Johnsbury Armory building, a three story masonry structure. The building is currently vacant and is located on an approximately 0.44 acre parcel. The property is located in downtown St. Johnsbury in an area with mix-use development. The property is located on the west side of Main Street and is bounded on the north and west by the Saint Andrews Episcopal Church and the Grace Methodist Church, respectively; a dentist's office to the south and to the east, across Main Street is the Passumpsic Savings Bank and several other small business'.

Pursuant to the Phase I Environmental Site Assessment (May 2012, the Johnson Company), the property has been developed since at least 1882, originally with four separate buildings. Apparently the current armory building was constructed circa 1916. Modern uses of the building include use by the St, Johnsbury Police Department, the American Red Cross and the St. Johnsbury Parks and recreation Department. The Phase I indicates that the Vermont National Guard last occupied the building in 1976.

Cardno ATC understands that the Saint Johnsbury History and Heritage Center is assessing the feasibility for redevelopment of the building into a possible office headquarters, education and museum space.

This US EPA Brownfields project was completed by Cardno ATC for the Northeastern Vermont Development Association (NVDA) and pursuant to the approved Site Specific Quality Assurance Project Plan (SSQAPP) Addenda F-1 dated November 28, 2012. The Scope of Work for this project as outlined in the SSQAPP was based on the findings of the Phase I Environmental Site Assessment completed for the site in May of 2012 (prepared by the Johnson Company).

2.0 FINDINGS

2.1 ASBESTOS SURVEY

Pursuant to the SSQAPP, all asbestos samples were collected pursuant to the Cardno ATC SOP F-SOP-1.12. This *baseline* asbestos survey was also conducted pursuant to ASTM method E2356-04 "Standard Practice for Comprehensive Building Asbestos Surveys". Samples were submitted to the Cardno ATC Asbestos Laboratory Division (NY, NY) for laboratory analysis via polarized light microscopy (PLM) analysis.

A *Baseline Survey* is a building-wide or facility wide inspection that provides a general sense of the overall location, type, quantity and conditions of asbestos –containing materials (ACM) present. The baseline survey provides information for long-term management of ACM and prioritization of response actions, however a baseline survey is unobtrusive in that walls and other barriers are not damaged (opened up) in order to collect samples. Therefore, it is possible that suspect ACM may be located behind walls other barriers (such as inside boilers, doors, etc.).

Previous asbestos sampling data from Crothers Environmental Group LLC's "Limited Interior Asbestos Inspection" report Dated November 1, 2008 was utilized and sampling data from the 2008 report was incorporated into this report. The fieldwork was conducted by Cardno ATC on December 10, 17, 18 and 28, 2012.

Asbestos bulk samples were analyzed by Polarized Light Microscopy (PLM). Asbestos Containing Material (ACM) is defined as material that contains any type of asbestos in an amount greater than 1% asbestos.

The following building materials were identified as ACM from this survey:

- **Air cell pipe insulation (Homogenous Material No. 24 [H 24])**
- **Mudded joint packings (H42)**

The following materials were found to previously be identified as ACM within the previous 2008 survey:

- **Plaster walls and ceilings (H11)**

The following materials have not been sampled (due to inaccessibility) and should be assumed to be ACM:

- **Door Insulation (H15)**
- **Fire Brick (H26)**
- **Vibration Cloth (H34)**
- **Boiler Door Insulation (H37)**
- **Boiler Internal Materials (H43)**

The following materials were found to contain trace amounts (<1%) of asbestos:

- **Exterior Window Caulking (H4)**
- **Exterior Tar Brick Caulking (H5)**

Appendix A of this report contains a listing of suspect asbestos containing materials, a sample location diagram and the asbestos laboratory hardcopy results.

2.1.1 Asbestos Quality Assurance/Quality Control

For the purposes of comparing duplicate samples, samples 01A and 01B (duplicate) were utilized. Both samples were below were below laboratory detection limits. Laboratory in-house QA/QC included duplicate analysis of 10% of samples by the original analyst as well as a duplicate analysis by a second analyst (recounts). All QA/QC laboratory recounts passed QA/QC requirements; the Data Entry sheet for the asbestos bulk sample laboratory recounts is included with the laboratory hardcopy results in **Appendix A**.

2.1.2 Asbestos Recommendations

- Prior to any renovations/demolition to the building, any asbestos containing materials that may be disturbed must be removed or abated as required (per State and Federal regulations).

- Suspect ACM may be enclosed or concealed in areas Cardno ATC did not access during this survey. If suspect materials that are not included in this survey are discovered during renovation / demolition activities, they shall be tested prior to disturbance.

- Materials containing “trace” amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to disturbance. Refer to “OSHA Standard Interpretation and Compliance Letter” dated 8/13/1999, subject: “Requirements for demolition operations involving material containing <1% asbestos”.

- Asbestos abatement activities must be performed by a Vermont certified abatement contractor following all applicable State and Federal regulations. Abatement activities should be designed by a Vermont certified asbestos project designer and overseen by a Vermont certified asbestos project monitor.

2.2 PCB IN BUILDING MATERIALS SURVEY

Pursuant to the SSQAPP, all PCB samples were collected pursuant to the Cardno ATC SOP F-SOP-1.17. Samples were submitted to EMSL Analytical, Inc. (Cinnaminson, NJ) for laboratory analysis via 3540C/8082A analysis. PCB bulk samples of suspect materials (oil paints, caulking or similar elastic sealant materials installed prior to 1978) were collected; a minimum of two bulk samples representative of each different homogeneous area of suspect material sampled were collected.

Cardno ATC visually inspected accessible areas of the facility for homogeneous groupings of suspect PCB containing materials. Only suspect (window and door caulking, paint, expansion joints etc.) materials installed prior to 1978 were investigated. Cardno ATC sampled ten (10) materials that are considered to be suspect for containing PCB's.

The EPA regulatory limit ("not authorized for use" under the Toxic Substances Control Act of 1976 [TSCA]) for PCBs in building materials is 50 parts per million (ppm).

The gray floor paint in the basement level (H16) was the only material identified during this survey as containing levels of PCBs in excess of 50 ppm. The PCB content of the gray paint was identified as containing levels up to 5,700 ppm.

Appendix B of this report contains a listing of suspect PCB materials, a PCB sample location diagram and PCB laboratory hardcopy results.

2.2.1 PCB Quality Assurance/Quality Control

Pursuant to the SSQAPP one duplicate PCB sample was collected. Sample number 16C (grey floor paint, H16) is a duplicate of sample number 16B (as well as 16A). The Relative Percent Difference (RPD) between samples 16B (5,600 ppm) and 16C (4,600) is 21%, which is within the RPD requirement of 50% pursuant to the SSQAPP. The RPD between samples 16A and 16C is 0%.

2.2.2 PCB Recommendations

- Additional PCB sampling should be conducted to determine to what extent, if any, of the PCBs from the flooring paint have leached into the concrete floor substrate. Required removal of PCB materials (such as the flooring paint) must be conducted pursuant to TSCA and may require an EPA approved work plan.

2.3 LEAD BASED PAINT XRF SURVEY

Pursuant to the SSQAPP, the XRF lead based paint (LBP) Survey was conducted pursuant to the Cardno ATC SOP F-SOP-1.19. The LBP XRF survey of the building was conducted on December 10 and 17, 2012. Lead based paint is defined as paint or other surface coatings that contain lead equal to or greater than 1.0 mg/cm^2 (by XRF).

A lead paint analyzer (XRF) was used to sample representative painted components and surfaces for lead content. The following **Table 1** summarizes the various components identified as LBP.

Table 1: Summary of XRF Lead in Paint Results						
Component	***Room No.***	***Condition***	***Substrate***	***Color***	***Location in Room***	***Result (mg/cm^2)***
Windows – All Components	Exterior	Good - Poor	Wood	White	All	>9.9 (maximum reading of instrument)
Side Porch	Exterior	Good	Wood	White	D side	3.0
Window Wells	Throughout Building	Good - Poor	Wood	White	All	>9.9 (maximum reading of instrument)
Wall	Room 21	Good	Brick	Blue	C side	3.0
Door	Room 21	Good	Metal	Green	C side	3.4
Floor	Throughout Basement	Fair - Poor	Concrete	Grey	All	1.5
Walls and Ceiling	Room 23	Good - Fair	Brick	Green	All	1.5
Walls	Room 24	Good - Poor	Brick	Green	All	3.0
Walls	Room 25	Good	Brick	White	All	3.0
Stair Riser	Room 25	Good	Wood	White	A side	1.1

Individual room by room testing results are contained on the field sheets included in **Appendix C** of this report.

2.3.1 Lead in Paint Quality Assurance/Quality Control

Pursuant to QA/QC procedures within the Cardno ATC SOP (F –SOP-1.19), QA/QC repeat testing was conducted on ten (10) surfaces. A procedure for calculating the retest tolerance limit is specified in the XRF instrument Performance Characteristic Sheet (PCS). The retest conducted by Cardno ATC was within the tolerance limit for the instrument.

Appendix C contains the room location diagram, field sheets, XRF instrument protocol, the repeated testing (QA/QC) results, and the PCS.

2.3.2 Lead in Paint Recommendations

- If Demolition/Renovation activities are planned that would disturb finish coatings, then appropriate work practices should be employed to satisfy the Lead in Construction OSHA Standard (1926.62), including but not limited to representative air monitoring to determine actual employee exposures.
- Copies of this report should be provided to the general contractor and demolition contractor to assist with compliance to VOSHA Lead in Construction Standard.
- Any abatement of lead hazards must be completed by a Vermont licensed lead abatement firm, pursuant to the Vermont Regulations for Lead Control.

- Subsequent to renovation/demolition activities a lead-specific final cleaning should be conducted in all areas and lead in dust sampling should be completed prior to building occupancy.

2.4 LEAD IN DUST SAMPLING

As required by the SSQAPP, lead-in-dust sampling was conducted pursuant to the Cardno ATC SOP F-SOP-1.20.

Cardno ATC collected lead in dust samples from representative locations throughout the facility on December 17, 2012. Lead in dust sampling was conducted to determine existing lead-in-dust levels and to determine potential impacts related to the reported use of the basement as an indoor firing range. On December 10, 2012, Cardno ATC interviewed St. Johnsbury Police Chief Clement Houde and Corporal Gil Roberts regarding the possible former use of the armory building and the location of the former firing range. According to Cpl. Roberts, the building has not included an indoor firing range since at the latest 1992. Upon review of the space, it was determined that the range was likely located in the basement in the vicinity of rooms 26, 27, and 28. Based on this finding, lead in dust samples numbers 13-20 were collected within rooms 26 – 28 (as well as other areas of the building).

Although lead in dust samples are not a regulatory requirement prior to renovation activities, the "clearance levels" contained in the Vermont Regulations for Lead Control (V.S.A. Title 18, Chapter 38) were utilized as de facto target levels for this project. The Vermont clearance levels are 40 µg/ft² for floor samples and 250 µg/ft² for interior window sills.

For lead-abatement projects in Vermont, work areas must be cleaned until clearance dust samples indicate levels of lead-in dust are below the clearance levels. The clearance levels are commonly utilized outside of lead-abatement projects as standards to determine if a response action is needed related to lead in dust contamination. All lead in dust samples were analyzed by EMSL Analytical, Inc. of Cinnaminson NJ by Analytical Method SW846-6010B/C ICP-AES. The following **Table 2** summarizes lead in dust sampling results

Table 2 : Pre Renovation Lead in Dust Sample Results

Sample Number	*Room # / Location*	*Floor*	*Lead Concentration (µg/ft²)*	*VT Clearance Level (µg/ft²)*
F-01	03-Floor	2nd	52	40
S-02	03 – Sill	2nd	86,000	250
F-03	08 – Floor	2nd	250	40
S-04	08 - Sill	2nd	20,000	250
F-05	04 - Floor	2nd	230	40
F-06	10 - Floor	2nd	130	40
F-07	12 - Floor	1st	2.7	40
S-08	12 - Sill	1st	1,200	250
F-09	16 - Floor	1st	21	40
S-10	16 - Sill	1st	4,300	250
F-11	17 - North Floor	1st	6	40
F-12	17 - South Floor	1st	7.5	40
F-13	26 - East Floor	Basement	430	40
F-14	26 - Center Floor	Basement	350	40
F-15	26 - West Floor	Basement	340	40
S-16	26 - East Sill	Basement	860	250
S-17	26 - Center Sill	Basement	1,800	250
S-18	26 - West Sill	Basement	390	250
F-19	28 - Floor	Basement	83	40
F-20	27 - Floor	Basement	260	40
F-21	29 - Floor	Basement	670	40
F-22	32 - Floor	Basement	590	40
F-23	21 - Floor	Basement	510	40
F-24	23 - Floor	Basement	2,600	40
F-25	Field Blank	NA	BDL	Not Applicable
F-26	Blind Spike*	NA	180 µg	Not Applicable

** - Spike Known Value of 232.6 µg*

As noted in **Table 2**, lead-in-dust results above target/clearance levels were identified in all levels of the building. Sample results above the target levels are shaded in **Table 2**; rooms where the former firing range was apparently located have also been highlighted (in yellow) in **Table 2.**

2.4.1 Lead in Dust Quality Assurance/Quality Control

Pursuant to QA/QC procedures within the SSQAPP Cardno ATC submitted one "blind" lead-in-dust spike sample (sample # F-26) with a known lead content of 232.6 µg. Pursuant to the SSQAPP the acceptance criteria is within +/- 30% of the known lead content (162.82 – 302.38 µg). The analysis result of the spike sample was 180 µg and therefore falls within the acceptance criteria. In addition, no lead was detected in the field blank (sample # F-25).

Appendix D contains the lead in dust sample location diagram (which includes the approximate location of the former firing range) and the lead in dust laboratory hardcopy results.

2.4.2 Lead in Dust Recommendations

- Copies of this report should be provided to the general contractor and demolition contractor to assist with compliance to VOSHA Lead in Construction Standard.
- Subsequent to renovation/demolition activities a lead-specific final cleaning should be conducted in all areas and lead in dust sampling should be completed prior to building occupancy.

2.5 Indoor Air Quality Investigation

Pursuant to the SSQAPP, Cardno ATC conducted air sampling for culturable fungi and total fungal structures in four (4) indoor locations and one (1) outdoor location for comparison. *The mold assessment was conducted pursuant to the Cardno ATC "Guidelines for Environmental Sampling for Microbial Contamination" (April 2002) hereby incorporated into the Cardno ATC Generic QAPP as Cardno ATC SOP F-SOP-1.21.*

Cardno ATC utilized an Andersen N6 sampler to collect the airborne culturable mold samples on malt extract agar plates for 5 minutes at a flow rate of approximately 27.29 liters per minute. Zefon Air-O-Cell™ microbial spore trap cassettes and a Buck Bio-Aire sampling pump (serial number B150547) were used to collect each sample of total airborne fungal structures for 10 minutes at a flow rate of 15 liters per minute. Both bioaerosol sampling techniques were calibrated prior to sample collection. Bulk (swab) samples were also collected in areas of apparent mold growth.

The air and bulk samples were submitted to EMSL Analytical Inc. of Cinnaminson NJ for analysis of predominant mold species and concentrations.

The American Conference of Governmental Industrial Hygienists (ACGIH) considers comparison of indoor/outdoor bioaerosol data a common method for evaluating indoor fungal reservoirs or concerns. In well maintained indoor environments, the total concentrations of fungi in the indoor air are commonly equal to, or less than, the total concentration outdoors. If indoor fungal bioaerosol concentrations are greater than those outdoors, then indoor fungal reservoirs are likely to be present (however winter conditions will generally result in lower outdoor levels). In addition, the types (i.e., taxa or groups) of fungal bioaerosols found inside a building should be qualitatively similar to the taxa recovered outdoors; presuming outdoor air is the only source of indoor fungal bioaerosols. There are no regulatory standards or other widely accepted numerical guidelines available for interpretation of bioaerosol data. Current ACGIH guidelines refrain from providing numerical thresholds for bioaerosols.

The following **Table 3** presents the total quantitative results for the culturable air samples:

Table 3: Culturable Sample Analysis			
Sample Number	***Location***	***Predominant Species***	***Total CFU/m^3***
IP-01	Exterior – North Door	*Penicillium*	98
IP-02	Room 3 – 2nd Floor	*Aspergillus*	210
IP-03	Room 11 – 1st Floor	*Aspergillus*	511
IP-04	Room 25 - Basement	*Aspergillus*	252
IP-05	Field Blank	*None Detected*	-

Predominant culturable species found indoors (Aspergillus) were different than the predominant species noted outdoors (Penicillium). The outdoor total was lower than indoor concentrations. Based on Cardno ATC's experience the indoor levels are not considered significantly elevated and due to ambient temperatures being at or below freezing (which would serve to reduce the total cultural spore concentrations and types found outside) it is not unusual for indoor levels to exceed outdoor levels under these conditions. The predominant types of fungi identified (inside and outside) are common types of fungi. Based on Cardno ATC's experience the culturable levels identified do not represent a significant concern.

The following **Table 4** presents the quantitative results for the total airborne fungal structure samples:

Table 4: Total Airborne Fungal Structure Sample Analysis

Sample Number	***Location***	***Predominant Species***	***Total Structures/m^3***
Z-01	Exterior – North Door	*Aspergillus/Penicillium*	611
Z-02	Room 3 – 2nd Floor	*Aspergillus/Penicillium*	577
Z-03	Room 11 – 1st Floor	*Aspergillus/Penicillium*	458
Z-04	Room 25 - Basement	*Aspergillus/Penicillium*	3,187
Z-05	Field Blank	*None Detected*	-

The predominant spore types found outdoors were similar to the indoor predominant types (Aspergillus/Penicillium) and except for the basement sample the totals were similar as well. The basement (room 25) level however, did indicate a possible amplification of Aspergillus/Penicillium fungal types.

The following **Table 5** presents the total qualitative results for the swab samples:

Table 5: Fungal Structure Swab Sample Analysis

Sample Number	***Location***	***Substrate***	***Area (ft^2)***	***Predominant Species***	***Category Count***
S-01	Room 16/11 – wall Bottom of Stairs	*Plaster*	*<1*	*Chaetomium*	High
				Penicillum	Medium
				Aspergillus	Rare
S-02	Room 03 – West Wall	*Plaster*	*<1*	*Penicillium/Aspergillus*	Rare
				Cladosporium	Rare
S-03	Room 16 – Ceiling	*Structural Wood*	*25*	*None Detected*	-
S-04	Field Blank	*Not Applicable*	*Not Applicable*	*None Detected*	-

As noted in Table 5 above, only limited areas of apparent visual fungal growth were noted by Cardno ATC Swab samples (samples S-01, S-02 and S-03) were collected from areas of apparent growth. Analysis of swab samples for fungal spores and structures indicated the presence of common fungal structures on only two of the three swab samples. Extensive fungal growth was not observed by Cardno ATC within the building. **Appendix E** includes the fungi sample location diagram and laboratory hardcopy results of the fungi sampling.

2.5.1 IAQ Quality Assurance/Quality Control

Indoor air quality sampling was conducted pursuant to Cardno ATC's "Guidelines for Environmental Sampling for Microbial Contamination". One field blank sample was collected for each type of fungal analysis. No contamination was noted on any of the field blank samples.

2.5.2 IAQ Recommendations

- If significant fungal growth is identified during renovation/demolition activities, removal of the growth should be conducted pursuant to the EPA document Mold Remediation in Schools and Commercial Buildings (EPA 402-K-01-001).
- Subsequent to renovation/demolition activities a final HEPA cleaning should be conducted in the basement area.
- Any sources of water infiltration should be corrected. Continued water infiltration (such as roof leaks) would likely cause additional IAQ related problems. If renovations are not planned for the near-future, additional mold sampling may be warranted.

2.6 SEDIMENT SAMPLING AND DYE TEST

Cardno ATC conducted an investigation related to the presence of the floor drain system in the basement, to help determine potential impacts to the subsurface related to potential vehicle maintenance previously conducted in the basement level. The investigation included a visual inspection of the drain system, interviewing individuals with knowledge of the building's historical use, sampling of sediment in the floor drain itself, as well as performing a dye tracing test to determine the discharge location of the drain system.

The floor drain system in the basement consists of and exterior catch basin adjacent to the southwest entrance, an abandoned trench drain in the southwest corner, a floor drain to the north of the trench drain, a sump pump adjacent to the floor drain and a clean-out pit in the northeast corner of the basement. All the basement catch basins and sump/pump appear to discharge tot the main wastewater line for the building which runs along the north wall and to the cleanout-pit (see dye-test results below). **Appendix F** contains a diagram of the configuration of the floor drain system.

On December 10, 2012, Cardno ATC interviewed St. Johnsbury Police Corporal Gil Roberts regarding the drainage configuration in the vicinity of room 28. Cpl. Roberts described the Police Department's historical use of the room (vehicle maintenance, cleaning, and storage) as well as drainage patterns during use.

The visual examination and Cpl. Roberts' description both indicated that wastewater entering the floor drain in room 28 flows north into the sump at the north end of room 28. A sump pump lifts that water into the building main wastewater line in room 29. From room 29, the main wastewater line runs east along the north wall of the basement, until it reaches a cleanout/trap in a pit in the northeast corner of room 21. From there it continues generally east to the city sewer under Main St.

On December 17, 2012, sediment samples from the floor drain in room 28 were collected to be analyzed for the following analytes: diesel range organics (S-01) via EPA SW-846 Method 8015B – DRO., mercury (S-03) via EPA SW-846 Method 7471B, metals (S-05) via EPA SW-846 Method 6010 C and volatile organic compounds (S-07) via EPA SW-846 Method 8260B. Duplicate samples were collected of each (S-02, S-04, S-06, and S-08, respectively). All sediment samples were collected pursuant to Cardno ATC's standard operating procedure F-SOP-1.7. The results of the sediment sampling were compared to the Soil Screening Values (SSVs) for industrial and commercial properties as listed in the Vermont Department of Environmental Conservation's "Investigation and Remediation of Contaminated Properties

Procedures". **Sediment concentrations of arsenic and bromomethane exceeded the SSVs.** It should be noted that concentrations of four analytes were identified in S-08 (duplicate) that were not identified in S-07. None of these additional detections exceeded the relevant SSV. A summary of sediment sample detections (from the initial sediment samples) are provided in the following **Table 6**:

Table 6: Sediment Sample Detections

Sample Number	*Analyte*	*Result*	*SSV*	*Unit*
S-01	DRO*	120	1,000	mg/kg
S-03	Mercury	0.063	43	mg/kg
S-05	Antimony	0.54	410	mg/kg
S-05	Arsenic	2.5	1.6	mg/kg
S-05	Beryllium	0.38	2,000	mg/kg
S-05	Cadmium	0.45	800	mg/kg
S-05	Chromium	19.3	103	mg/kg
S-05	Copper	56.4	41,000	mg/kg
S-05	Lead	62.1	800	mg/kg
S-05	Nickel**	20.1	20,000	mg/kg
S-05	Zinc	101	310,000	mg/kg
S-07	Bromomethane	37	32	µg/kg
S-07	Acetone	310	630,000	µg/kg
S-07	Methyl acetate	120	1,000,000	µg/kg

* - Diesel Range Organics, compared to the SSV for Total Petroleum Hydrocarbons

On December 18, 2013, a dye test was performed to confirm the discharge point of the building wastewater system. Hugh Wescott of the St. Johnsbury Department of Public Works (DPW) visited the site. Mr. Wescott indicated that he has no knowledge of any wastewater discharge from the armory building other than the main wastewater line to the city sewer. DPW provided access to a sewer junction (manhole) downstream of the armory. Dyed water was released into the cleanout in the northeast corner of room 21. Approximately six minutes later, dye was observed flowing through the downstream manhole, located east of the site in a parking lot off of Route 2 (this downstream manhole location is depicted on the Site Diagram).

The results of this investigation indicate the likelihood that any pollutant captured by the floor drain system in room 28 would have been discharged to the city wastewater system and it would be unlikely that a significant impact to the subsurface has occurred on site.

2.6.1 Sediment Sampling Quality Assurance/Quality Control

The sediment sampling was conducted pursuant to the Cardno ATC "Standard Procedure, Sediment Sampling" hereby incorporated into the Cardno ATC Generic QAPP as Cardno ATC SOP F-SOP-1.7. Of analytes that were detected in the sediment samples, only acetone (a common laboratory contaminant) was found in excess of the relative percent difference requirements established in the QAPP. It should be noted that, due to laboratory equipment malfunctions, analysis of the VOC duplicate samples was completed outside of the holding time. However, due to the relative consistency between the initial and duplicate samples Cardno ATC considers the data to be valid.

2.6.2 Sediment Sampling and Dye Test Recommendations

Results of the investigation indicate elevated levels of some pollutants in the floor drain sediment. Any sediment (likely less than on 55-gallon drum) associated with the floor drain system should be excavated and disposed of according to all applicable state and federal regulations.

Signatures of Environmental Professionals

Cardno ATC has performed above activities in general conformance with the project QAPP (Addenda F-1) for the Former St. Johnsbury Armory located in St. Johnsbury, VT.

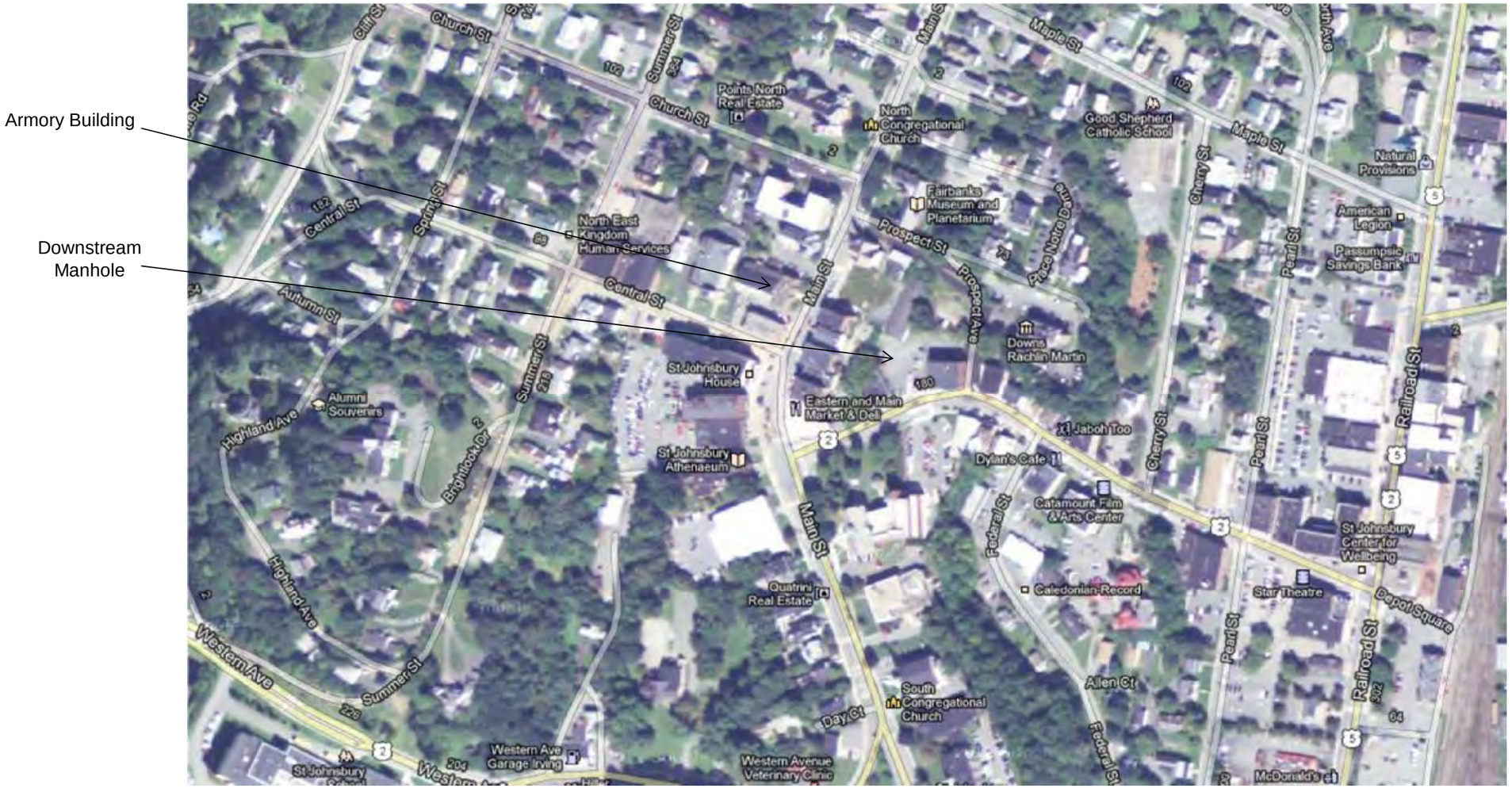
CARDNO ATC

Harland Miller
Senior Environmental Technician

Devin Porter
Senior Environmental Technician

Andra Liberty
Project Manager

Stephen Znamierowski
Senior Project Manager



SITE LOCATION DIAGRAM

Address: St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

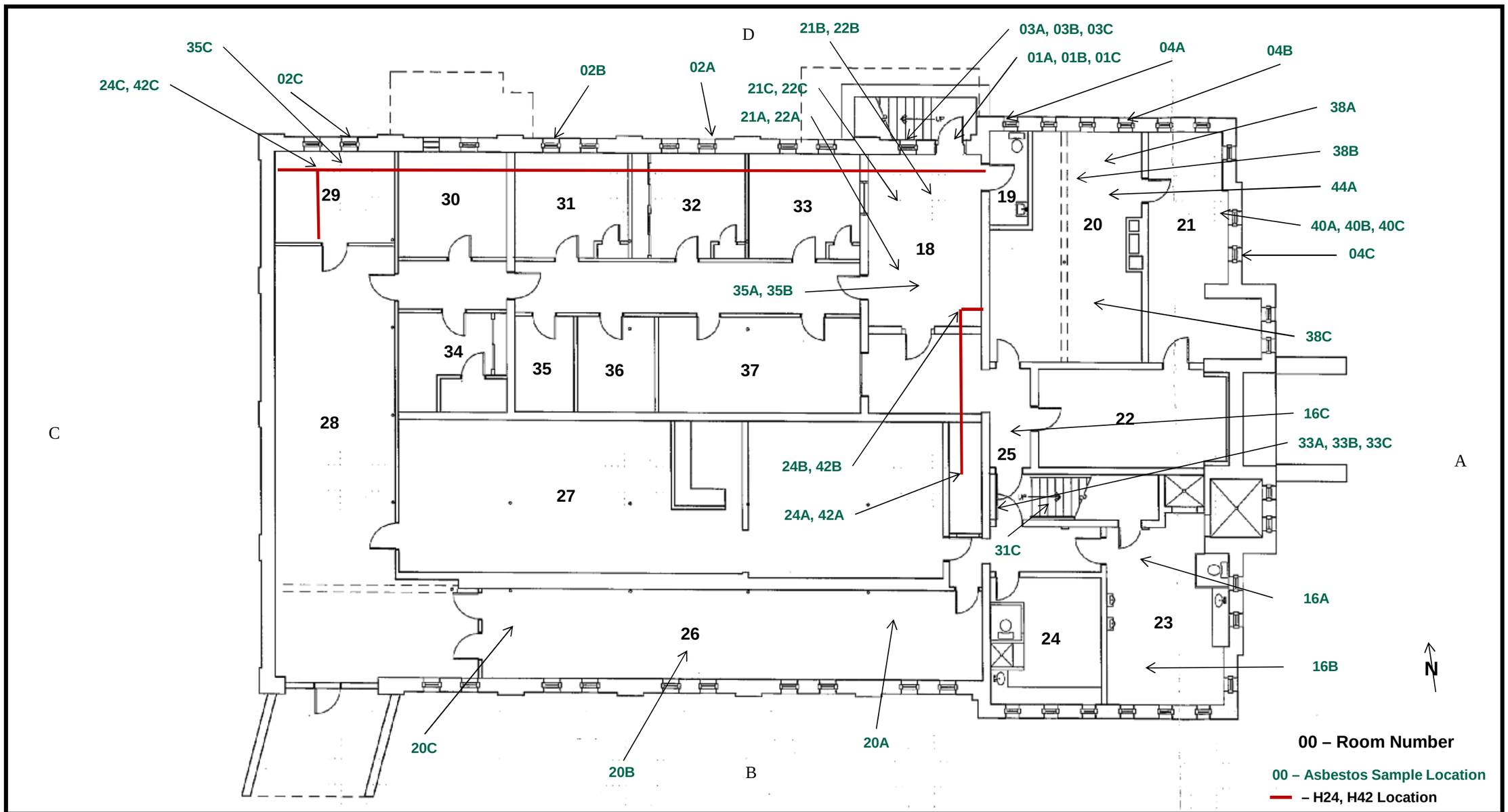
SOURCE : Field Notes

SCALE: Unknown

Appendix A

Asbestos Sample Location Diagram
List of Suspect Asbestos-Containing Materials
Asbestos Laboratory Report

Asbestos Sample Location Diagram



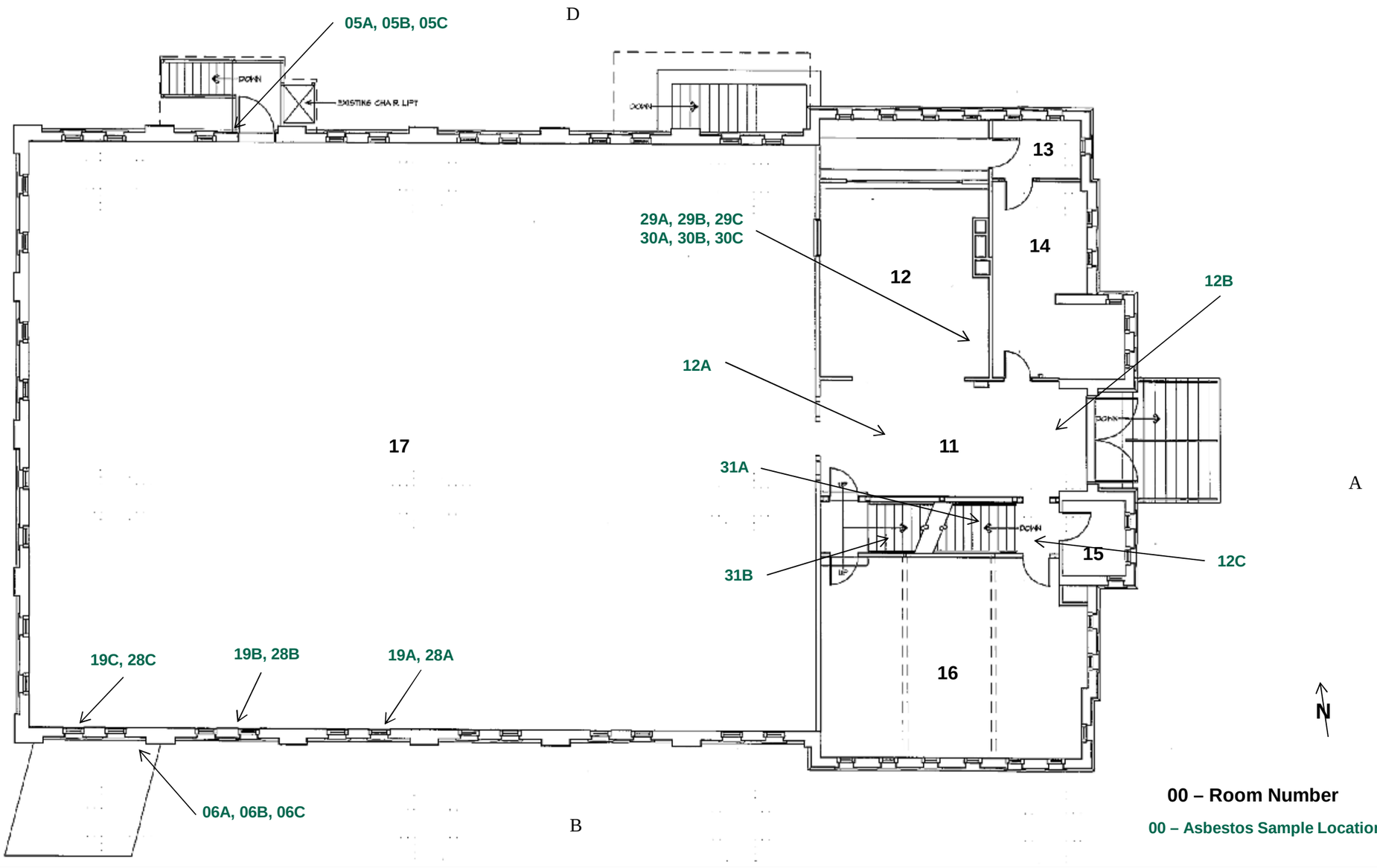
SAMPLE LOCATION DIAGRAM – Asbestos

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM – Asbestos

Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

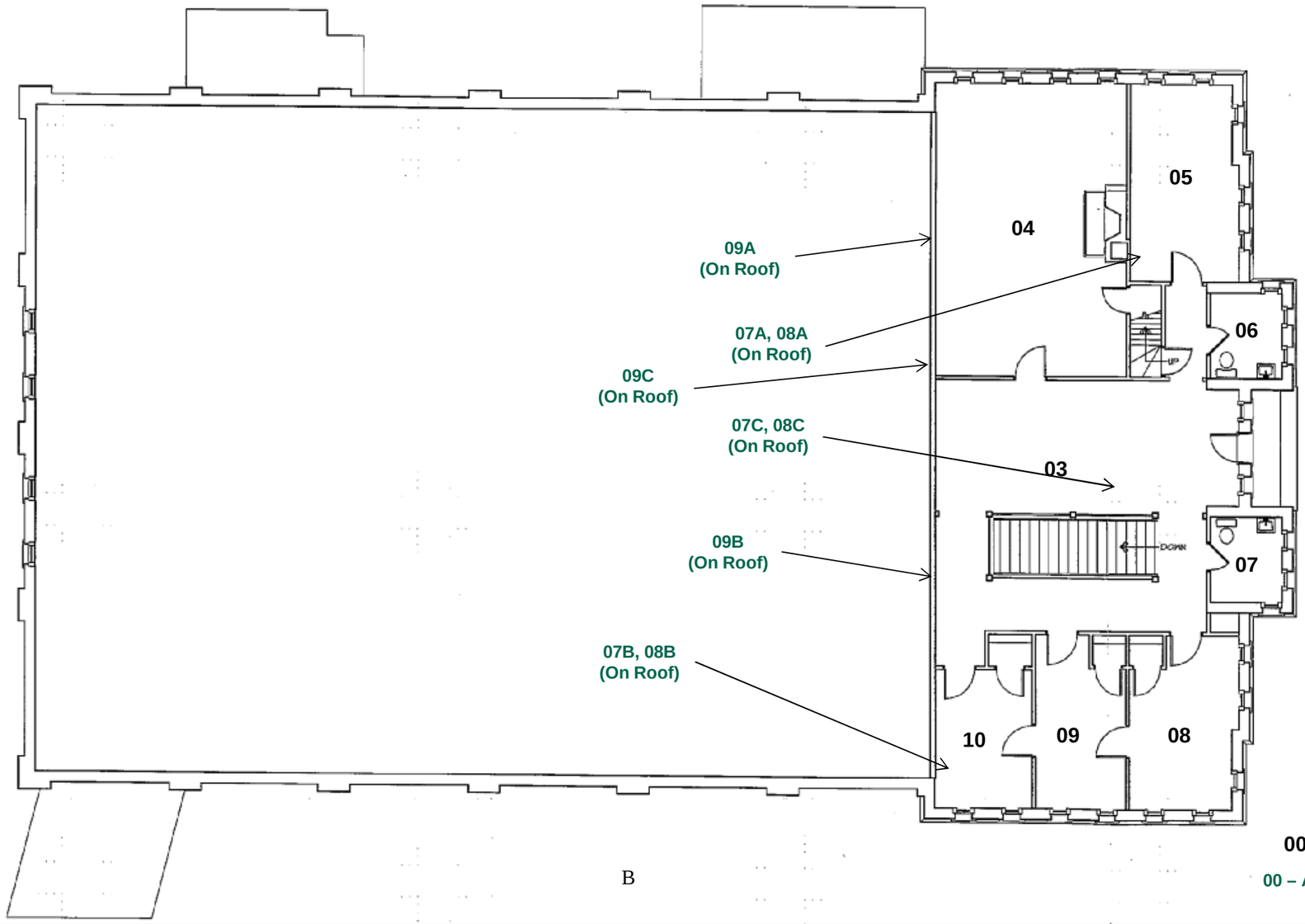
SOURCE : Field Notes

SCALE: Not to scale

D

C

A



B

00 – Room Number

00 – Asbestos Sample Location

SAMPLE LOCATION DIAGRAM – Asbestos

Address: St. Johnsbury Armory – 2nd Floor & Roof
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

List of Suspect Asbestos-Containing Materials

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H1	Door Caulking – Exterior Gray	ND*	01A-01C	NA
H2	Window Caulking – Exterior White	ND*	02A-02C	NA
H3	Window Glazing – Exterior White		03A-03C	NA
H4	**Window Caulking – Exterior White**	**Trace***	**04A-04C**	**NQ Exterior window to brick**
H5	**Tar Brick Caulking - Exterior**	**Trace***	**05A-05C**	**NQ Exterior under roof edge**
H6	Flashing- Exterior Silver	ND*	06A-06 C	NA
H7	Roof Field – Built up pebble and Tar	ND*	07A-07C	NA
H8	Roofing Felt	ND*	08A-08C	NA
H9	Caulk at Gambrel Flashing – Exterior Black	ND*	09A-09C	NA
H10	2x4 Ceiling tile – Worms and Pinholes	ND	Previously Sampled	NA
H11	**Plaster Walls and Ceilings**	**2%**	**Previously Sampled**	**NQ Throughout facility**
H12	Carpet Mastic	ND*	12A-12C	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H13	Gypsum Wall Board	ND	Previously Sampled	NA
H14	Joint Compound	ND	Previously Sampled	NA
H15	**Door Insulation**	**Assumed Positive**	**NS**	**1 Safe door Basement**
H16	Floor Paint - Gray	ND*	16A-16C	NA
H17	Decorative Coating	ND*	17A-17C	NA
H18	Ceiling Tile Panels – 4x4 Gypsum	ND*	Previously Sampled	NA
H19	Wall Paint - White	ND*	19A-19C	NA
H20	Floor Paint - Blue	ND*	20A-20C	NA
H21	12x12 Floor Tile - Beige	ND*	21A-21C	NA
H22	Mastic associated with H21	ND*	22A-22C	NA
H23	Carpet Mastic	ND*	Previously Sampled	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing “trace” amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to “OSHA Standard Interpretation and Compliance Letter” dated 8/13/1999, subject: “Requirements for demolition operations involving material containing <1% asbestos”.

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H24	**Aircell Pipe Insulation – 6" OD**	**40%**	**24A-24C**	**~100 LF Throughout basement maybe enclosed within walls & some debris on abated pipes**
H25	2x4 Ceiling Tile – Pressed Board	ND	Previously Sampled	NA
H26	**Brick associated with Fire place**	**Assumed Positive**	**NS**	**30 SF Second floor**
H27	2x4 Ceiling Tile – Worm & Pinholes	ND*	Previously Sampled	NA
H28	Wall Coating – Window Sill White	ND*	28A-28C	NA
H29	Resilient Sheet Flooring – Blue & Maroon	ND*	29A-29C	NA
H30	Mastic associated with H29	ND*	30A-30C	NA
H31	Stair Tread Risers – Black	ND*	31A-31C	
H32	Boiler Insulation – Block type blue tinted	ND	Previously Samples	NA
H33	Glue Dabs – Brown	ND*	33A-33C	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H34	Vibration Cloth	**Assumed Positive**	**NS**	**4 SF** **Basement/Gym**
H35	Blown-in Insulation	ND*	35A-35C	NA
H36	Boiler Insulation – Skim Coat	ND	Previously Samples	NA
H37	**Boiler Door Insulation**	**Assumed Positive**	**NS**	**4 SF** **Basement boiler room on boiler**
H38	Debris on Boiler, Exhaust, Duct & Hot water tank	ND*	38A-38C	NA
H39	Mastic on Concrete Floor	ND*	Previously Sampled	NA
H40	Pipe Putty	ND*	40A-40C	NA
H41	Sheet Flooring – Brown	ND*	Previously Sampled	NA
H42	**Mudded Joint Packing**	**33%**	**42A-42C**	**10 LF** **Throughout basement**

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H43	**Boiler Internal Materials**	**Assumed Positive**	**NS**	**NQ** **Boiler Room on boiler**
H44	Boiler Gasket	ND*	44A	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

Asbestos Laboratory Report

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Client: ATC ASSOCIATES INC. - VERMONT
171 COMMERCE ST., PO BOX 1486
WILLISTON , VT 05495
Fax: (802) 862-1405 **Phone:** (802) 862-1980

Project: NVDA

Sample Date : 12/19/2012
Date Received : 12/20/2012
Date Analyzed : 12/21/2012
ATC Batch # 25538
Methods: EPA 600/M4-82-020
ELAP 198.1, 198.6 and 198.4

Location: ST. JOHNSBURY ARMORY, MAIN ST., ST. J., VERMONT
Project # 63.35078.0013

Bulk Asbestos Analysis Results

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
01A	NORTH DOOR BASEMENT LEVER.	DOOR CAULKING GRAY (EXTERIOR)	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		NONE DETECTED
25538 -1		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
01B	NORTH DOOR BASEMENT LEVER.	DOOR CAULKING GRAY (EXTERIOR)	PLM	Trace% Cellulose	25% Mineral Filler 75% Organic Binders		NONE DETECTED
25538 -2		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
01C	NORTH DOOR BASEMENT LEVER.	DOOR CAULKING GRAY (EXTERIOR)	PLM	Trace% Cellulose	27% Mineral Filler 73% Organic Binders		NONE DETECTED
25538 -3		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
02A	NORTH SIDE CENTER WINDOW	WINDOW CAULKING - WHITE (EXTERIOR)	PLM	Trace% Cellulose	18% Mineral Filler 82% Organic Binders		NONE DETECTED
25538 -4		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
02B	NORTH SIDE WEST END 1ST FLOOR	WINDOW CAULKING - WHITE (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -5		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
02C	NORTH WEST CORNER WINDOW	WINDOW CAULKING - WHITE (EXTERIOR)	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		NONE DETECTED
25538 -6		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
03A	NORTH SIDE @ STAIRS BASEMENT LEVEL	WINDOW GLAZING (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -7		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
03B	SOUTH SIDE BASEMENT BY STAIRS	WINDOW GLAZING (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -8		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			
03C	SOUTH SIDE, EAST CORNER	WINDOW GLAZING (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -9		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			
04A	NORTH SIDE CENTER OF FRONT BLDG.	WINDOW CAULKING WHITE (EXTERIOR)	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		Trace Chrysotile
25538 -10		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
04B	WINDOW BY STAIRS NORTH SIDE	WINDOW CAULKING WHITE (EXTERIOR)	PLM	Trace% Cellulose	28% Mineral Filler 72% Organic Binders		Trace Chrysotile
25538 -11		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
04C	FRONT OF BLDG. NE CORNER	WINDOW CAULKING WHITE (EXTERIOR)	PLM	Trace% Cellulose	32% Mineral Filler 68% Organic Binders		Trace Chrysotile
25538 -12		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
05A	@ NORTH DOOR (GYM)	TAR COATING ON BRICK (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		Trace Chrysotile
25538 -13		Color: BLACK					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
05B	@ NORTH DOOR (GYM)	TAR COATING ON BRICK (EXTERIOR)	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		Trace Chrysotile
25538 -14		Color: BLACK					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
05C	@ NORTH DOOR (GYM)	TAR COATING ON BRICK (EXTERIOR)	PLM	Trace% Cellulose	23% Mineral Filler 77% Organic Binders		Trace Chrysotile
25538 -15		Color: BLACK					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
06A	@ SOUTH GARAGE	SILVER COATED FLASHING (EXT. ROOF)	PLM		21% Mineral Filler 79% Organic Binders		NONE DETECTED
25538 -16		Color: SILVER					
Analyzed By: Amr Fata				Comments: NOB recommended			
06B	@ SOUTH GARAGE	SILVER COATED FLASHING (EXT. ROOF)	PLM		18% Mineral Filler 82% Organic Binders		NONE DETECTED
25538 -17		Color: SILVER					
Analyzed By: Amr Fata				Comments: NOB recommended			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
06C	@ SOUTH GARAGE	SILVER COATED FLASHING (EXT. ROOF)	PLM		20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -18		Color: SILVER		Comments: NOB recommended			
Analyzed By: Amr Fata							
07A	@ HATCH	BUILT-UP TAR - ROOF	PLM	Trace% Cellulose	32% Mineral Filler 68% Organic Binders		NONE DETECTED
25538 -19		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
07B	@ SOUTH PARAPET DRAIN	BUILT-UP TAR - ROOF	PLM	Trace% Cellulose	35% Mineral Filler 65% Organic Binders		NONE DETECTED
25538 -20		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
07C	@ CENTER OF ROOF	BUILT-UP TAR - ROOF	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -21		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
08A	SEE #07A	ROOFING FELT	PLM	Trace% Cellulose	18% Mineral Filler 82% Organic Binders		NONE DETECTED
25538 -22		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
08B	SEE #07B	ROOFING FELT	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -23		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
08C	SEE #07C	ROOFING FELT	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		NONE DETECTED
25538 -24		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
09A	@ GAMBREL N.	BLACK CAULK @ GAMBREL	PLM	Trace% Cellulose	15% Mineral Filler 85% Organic Binders		NONE DETECTED
25538 -25		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
09B	@ GAMBREL S.	BLACK CAULK @ GAMBREL	PLM	Trace% Cellulose	15% Mineral Filler 85% Organic Binders		NONE DETECTED
25538 -26		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
09C	@ GAMBREL CENTER	BLACK CAULK @ GAMBREL	PLM	Trace% Cellulose	15% Mineral Filler 85% Organic Binders		NONE DETECTED
25538 -27		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
12A	ROOM 11 WEST END	CARPET MASTIC (1ST FLOOR)	PLM	11% Cellulose	17% Mineral Filler 72% Organic Binders		NONE DETECTED
25538 -28		Color: BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
12B	ROOM 11 @ STAIRS	CARPET MASTIC (1ST FLOOR)	PLM	8% Cellulose	17% Mineral Filler 75% Organic Binders		NONE DETECTED
25538 -29		Color: BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
12C	ROOM 11 OUTSIDE RM. 15	CARPET MASTIC (1ST FLOOR)	PLM	10% Cellulose	20% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -30		Color: BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
16A	ROOM 23 @ DOOR TO STAIRS	FLOOR PAINT GRAY (BASEMENT)	PLM	Trace% Cellulose	10% Mineral Filler 90% Paint		NONE DETECTED
25538 -31		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
16B	ROOM 23 SOUTH END	FLOOR PAINT GRAY (BASEMENT)	PLM	Trace% Cellulose	12% Mineral Filler 88% Paint		NONE DETECTED
25538 -32		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
16C	ROOM 25 @ ROOM 22	FLOOR PAINT GRAY (BASEMENT)	PLM	Trace% Cellulose	13% Mineral Filler 87% Paint		NONE DETECTED
25538 -33		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
19A	SAME AS 28C	WALL PAINT WHITE (ON BRICK)	PLM	Trace% Cellulose	15% Mineral Filler 85% Paint		NONE DETECTED
25538 -34		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
19B	SAME AS 28B	WALL PAINT WHITE (ON BRICK)	PLM	Trace% Cellulose	15% Mineral Filler 85% Paint		NONE DETECTED
25538 -35		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
19C	SAME AS 28A	WALL PAINT WHITE (ON BRICK)	PLM	Trace% Cellulose	15% Mineral Filler 85% Paint		NONE DETECTED
25538 -36		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
20A	ROOM 26 @ DOOR	FLOOR PAINT BLUE (BASEMENT)	PLM		12% Mineral Filler 88% Paint		NONE DETECTED
25538 -37		Color: BLUE		Comments: NOB recommended			
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
20B	ROOM 26 CENTER	FLOOR PAINT BLUE (BASEMENT)	PLM		10% Mineral Filler		
25538 -38					90% Paint		NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE		Comments: NOB recommended			
20C	ROOM 26 WEST END	FLOOR PAINT BLUE (BASEMENT)	PLM		11% Mineral Filler		
25538 -39					89% Paint		NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE		Comments: NOB recommended			
21A	ROOM 18 CENTER	12X12 FLOOR TILE - BEIGE	PLM		53% Mineral Filler 47% Organic Binders		
25538 -40							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
21B	ROOM 18 @ ROOM 19	12X12 FLOOR TILE - BEIGE	PLM		53% Mineral Filler 47% Organic Binders		
25538 -41							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
21C	ROOM 18 @ WEST SIDE CENTER	12X12 FLOOR TILE - BEIGE	PLM		51% Mineral Filler 49% Organic Binders		
25538 -42							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
22A	SAME AS 21A	MASTIC W/H21	PLM	Trace% Cellulose	10% Mineral Filler 90% Organic Binders		
25538 -43							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			
22B	SAME AS 21B	MASTIC W/H21	PLM	Trace% Cellulose	8% Mineral Filler 92% Organic Binders		
25538 -44							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			
22C	SAME AS 21C	MASTIC W/H21	PLM	Trace% Cellulose	10% Mineral Filler 90% Organic Binders		
25538 -45							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			
24A	ROOM 27 SAFE AREA	6" OD AIR CELL PIPE INSULATION	PLM	45% Cellulose	15% Mineral Filler		40% Chrysotile
25538 -46							
Analyzed By: Amr Fata		Color: GRAY		Comments:			**Total Asbestos: 40 %**
24B							
25538 -47							NOT ANALYZED
				Comments: Positive stop, see #24A			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
24C							
25538 -48							NOT ANALYZED
				Comments: Positive stop, see #24A			
28A	SOUTH SIDE GYM @ CENTER WINDOW	COATING ON BRICK AS WINDOW SILL	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		
25538 -49							NONE DETECTED
Analyzed By: Amr Fata		Color: GRAY		Comments: NOB recommended			
28B	SOUTH SIDE GYM @ SW WINDOW	COATING ON BRICK AS WINDOW SILL	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		
25538 -50							NONE DETECTED
Analyzed By: Amr Fata		Color: GRAY		Comments: NOB recommended			
28C	SOUTH SIDE GYM @ SW CORNER	COATING ON BRICK AS WINDOW SILL	PLM	Trace% Cellulose	24% Mineral Filler 76% Organic Binders		
25538 -51							NONE DETECTED
Analyzed By: Amr Fata		Color: GRAY		Comments: NOB recommended			
29A	ROOM 12 EAST WALL	RSF - BLUE & MAROON	PLM	Trace% Cellulose	38% Mineral Filler 62% Organic Binders		
25538 -52							NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE/MAROON		Comments: NOB recommended			
29B	ROOM 12 EAST WALL	RSF - BLUE & MAROON	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		
25538 -53							NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE/MAROON		Comments: NOB recommended			
29C	ROOM 12 EAST WALL	RSF - BLUE & MAROON	PLM	Trace% Cellulose	34% Mineral Filler 66% Organic Binders		
25538 -54							NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE/MAROON		Comments: NOB recommended			
30A	SAME AS 29A	MASTIC ASSOC. W/H29	PLM		8% Mineral Filler 92% Organic Binders		
25538 -55							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
30B	SAME AS 29B	MASTIC ASSOC. W/H29	PLM		6% Mineral Filler 94% Organic Binders		
25538 -56							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
30C	SAME AS 29C	MASTIC ASSOC. W/H29	PLM		10% Mineral Filler 90% Organic Binders		
25538 -57							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
31A	FIRST FLOOR @ BOTTOM OF STAIRS	STAIR RISERS BLACK	PLM	6% Cellulose	20% Mineral Filler 74% Organic Binders		NONE DETECTED
25538 -58		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
31B	FIRST FLOOR @ TOP OF STAIRS	STAIR RISERS BLACK	PLM	7% Cellulose	23% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -59		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
31C	BASEMENT STAIRS	STAIR RISERS BLACK	PLM	8% Cellulose	22% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -60		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
33A	ROOM 25 @ SAFE DOOR	GLUE DABS LT. BROWN	PLM	10% Cellulose	15% Mineral Filler 75% Organic Binders		NONE DETECTED
25538 -61		Color: LT.BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
33B	ROOM 25 @ SAFE DOOR	GLUE DABS LT. BROWN	PLM	12% Cellulose	18% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -62		Color: LT.BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
33C	ROOM 25 @ SAFE DOOR	GLUE DABS LT. BROWN	PLM	10% Cellulose	20% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -63		Color: LT.BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
35A	ROOM 18 CENTER	BLOWN IN INSULATION	PLM	Trace% Cellulose 90% FiberGlass	10% Mineral Filler		NONE DETECTED
25538 -64		Color: LT.GRAY		Comments:			
Analyzed By: Amr Fata							
35B	ROOM 18 CENTER	BLOWN IN INSULATION	PLM	Trace% Cellulose 85% FiberGlass	15% Mineral Filler		NONE DETECTED
25538 -65		Color: LT.GRAY		Comments:			
Analyzed By: Amr Fata							
35C	ROOM 29 EAST SIDE	BLOWN IN INSULATION	PLM	Trace% Cellulose 88% FiberGlass	12% Mineral Filler		NONE DETECTED
25538 -66		Color: LT.GRAY		Comments:			
Analyzed By: Amr Fata							
38A	TOP OF BOILER RM. 20	DEBRIS	PLM	2% Cellulose	98% Mineral Filler		NONE DETECTED
25538 -67		Color: BEIGE					
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
38B	TOP OF HOT WATER TANK RM. 20	DEBRIS	PLM	3% Cellulose	97% Mineral Filler		
25538 -68							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE					
38C	TOP OF EXHAUST RM. 20	DEBRIS	PLM	4% Cellulose	96% Mineral Filler		
25538 -69							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE					
40A	EAST WALL CENTER RM. 21	PUTTY ON PIPE	PLM	Trace% Cellulose	28% Mineral Filler 72% Organic Binders		
25538 -70							NONE DETECTED
Analyzed By: Amr Fata		Color: DK.GRAY		Comments: NOB recommended			
40B	EAST WALL CENTER RM. 21	PUTTY ON PIPE	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		
25538 -71							NONE DETECTED
Analyzed By: Amr Fata		Color: DK.GRAY		Comments: NOB recommended			
40C	EAST WALL CENTER RM. 21	PUTTY ON PIPE	PLM	Trace% Cellulose	32% Mineral Filler 68% Organic Binders		
25538 -72							NONE DETECTED
Analyzed By: Amr Fata		Color: DK.GRAY		Comments: NOB recommended			
42A	SAME AS 24A	MJP 6" OD ASSOC. W/H24	PLM	Trace% Cellulose	67% Mineral Filler		33% Chrysotile
25538 -73							
Analyzed By: Amr Fata		Color: LT.GRAY					**Total Asbestos: 33 %**
42B							
25538 -74							NOT ANALYZED
				Comments: Positive stop, see #42A			
42C							
25538 -75							NOT ANALYZED
				Comments: Positive stop, see #42A			
44A	@ FRONT OF BOILER	BOILER GASKET	PLM	2% Cellulose 5% FiberGlass	10% Mineral Filler 83% Organic Binders		
25538 -76							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type

NOTES:

1) The Limit of Detection is the same as the Reporting Limit for these results.

2) The Reporting Limit (RL) is the Limit of Quantitation. For point counts the limit of quantitation of 0.25%; based on one asbestos point counter over 400 non-empty points.

3) Asbestos Containing Material (ACM) Definition: > 1% asbestos by weight is considered an ACM

4) Disclaimer: The laboratory is not responsible for sample collection. Please refer to enclosed letter. This report may not be reproduced, except in full, without written approval by ATC Associates Inc. This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. This report relates only to the samples reported above as described in the chain of custody. Quality control data is available upon request.

5) Accredited by NVLAP #101187-0 and by NY State ELAP #10679

6) Confidentiality Notice: The document(s) contained herein are confidential and privileged information, intended for the exclusive use of the individual or entity named above.

7) Liability Notice: ATC Associates Inc. and its personnel shall not be liable for any misinformation provided to us by the client regarding these samples. This report relates only to samples submitted and analyzed.

8) When the results display more than three digits, only the first three are significant. The data within this report is reliable to 3 significant figures.

9) The condition of all samples was acceptable upon receipt.

10) The laboratory certifies that the test results meet all requirements of NELAC.

11) Supplement to test report batch # _____. Amendments: ____. Amendment Dates: _____. Amended by: _____

12) PLM Letter is attached on this report.

13) TRACE: The result is reported as Trace when No points are counted and asbestos is identified. For ELAP Trace is < 1%.

14) ATC certifies that this report is an accurate and authentic report of the results obtained from the laboratory analysis

15) The uncertainty for these test results is available upon request.

16) Assume ACM if Vermiculite is ≥ 10%. Not Reported Vermiculite means Not Detected

Amr Fata

Analyst:

Milena Bonezzi M. Bonezzi

Approved by
Laboratory Director:

BULK ASBESTOS ANALYSIS RESULTS

PLM Analysis Methodology

The samples were analyzed by industry accepted methods in accordance with EPA and ELAP methods using Polarized Light Microscopy (PLM) with dispersion staining in conjunction with stereoscopical analysis. Point counts are performed on samples regulated by these agencies. The Environmental Laboratory Approval Program (ELAP) has determined that analysis of non-friable organically bound materials (i.e. floor tile, roofing, etc.) and ceiling tiles with cellulose is not reliable when performed by Polarized Light Microscopy (PLM) method. Therefore, if this analysis included that of non-friable materials or ceiling tiles with cellulose under PLM and the results were negative, ATC must add this disclaimer to maintain our ELAP accreditation:

" Polarized light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing" .

Non-friable samples that contained *Trace* or *No* PLM detectable asbestos are classified as Inconclusive. Samples that are layered and analyzed by the gravimetric method as composites (NESHAP, AHERA) should be considered positive if results are between trace and 1%, unless every layer is analyzed separately.

ELAP requires that materials containing vermiculite at 10% or more must be reported as ACM.

EPA does not regulate mixed mineral assemblage like the anthophyllite-talc intergrowth that is found in paint and caulking unless these materials contain asbestos in an amount greater than 1%. Anthophyllite detected in paint and caulking samples might be a talc intergrowth.

ATC has the capability of performing TEM confirmation if so desired.

All bulk sample reports are checked and reviewed two times. Unused portions of samples are archived for three months unless client requests special handling. This report must not be used by the client to claim product endorsement by NIST or any agency of the U.S. government.

ATC Associates Inc. is not responsible for sample collection and analytical procedures not performed by our laboratory. This report may not be reproduced in part without the laboratory permission.

ATC Associates will not be liable for analytical results from samples that are not prepared according to the standard methods (EPA, ELAP, etc.) used by the laboratory (e.g. composite samples from different locations, samples with insufficient volumes, straight TEM samples without gravimetric procedures, dust samples, non-friable samples by PLM only).

Laboratory Equipment

Laboratory analysis was accomplished utilizing Olympus BH-2 Microscopes.

Quality Control

ATC Associates Inc. is accredited by NVLAP (Lab Code 101187-0) and NY State DOH ELAP (Lab ID 10879) for bulk and air fiber analyses. ATC participates in the Bulk Asbestos Sample Quality Assurance Programs for NVLAP and ELAP and maintains an in-house QC/QA program for bulk samples whereby 10% of all submitted samples are reanalyzed and documented in a Quality Control Manual. ATC also participates in a quarterly round robin QC/QA program for bulk samples with several accredited laboratories throughout the United States. Current and past QC/QA program results are available in the laboratory for inspection.

Accuracy and Precision

The phase abundances provided by point count may be considered within the limits of variability inherent in the method employed. For point counts the detection limit of 0.25% is based on one asbestos point counted over 400 non-empty points. If no points are counted and asbestos is identified, the result will be reported as trace. For ELAP trace is < 1%.

The analyses were supervised by Milena Bonezzi, Director of Laboratory Services, who has extensive experience in asbestos analysis by PLM and other methods. Please contact me regarding any questions relating to these materials at 212-353-8280 Ext. 247.

1. EPA Methods: 600/M4-82-020 and 600/R-93/116
2. ELAP Method: 4088 Items 198.1 and 198.4 and 198.6

Sincerely,

Milena Bonezzi
ATC Associates Inc.
Director of Laboratory Services

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vel mont / Main St I, Vel mont Project Number: 63-35078-0013

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538 TEMPERATURE °c: 25

1 Field Number 1A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Gray Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	22 Mineral Filler; FB Organic Binders; 0 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

2 Field Number 1B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Gray Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	25 Mineral Filler; FB Organic Binders; 0 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☑ AF		NOB PLM: ____

3 Field Number 1C	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Gray Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	27 Mineral Filler; FB Organic Binders; 0 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

4 Field Number 2A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color White Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	14 Mineral Filler; 82 Organic Binders; 4 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

	1	2	3	4
Field Number	2B	2C	3A	3B
Stereoscopic Exam				
Color	White	White	White	White
Texture	NF	NF	NF	NF
Homogenity	4	4	4	4
# of Layers	1	1	1	1
Color of Layer	—	—	—	—
Asbestos Detected Yes	☐	☐	☐	☐
Asbestos Detected No	☑	☑	☑	☑
Comments:				
PLM Optical Properties	Morphology, Extinction, RI ⊥, RI ∥, DS Color, Color, Pleo, Biref, Sign			
Asbestos Results PLM %	_____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite			
Other Fibrous %	TR Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐			
Non Fibrous %	20 Mineral Filler; 80 Organic Binders; 0 Vermiculite; _____ Other	22 Mineral Filler; 78 Organic Binders; 0 Vermiculite; _____ Other	20 Mineral Filler; 80 Organic Binders; 0 Vermiculite; _____ Other	20 Mineral Filler; 80 Organic Binders; 0 Vermiculite; _____ Other
Gravimetric (NOB) Results %	_____ Organic; _____ NA Residue Nfr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos			
Gravimetric (NOB)	Required ☐	Recommended ☑	Gravimetric PREP ☐	Gravimetric (NOB) PLM ☐	Gravimetric (NOB) TEM ☐
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			
Q.C. ☐	NOB PLM: _____			

L:\LAB_FORMS,DOCUMENTS AND RECORDS\OPTICAL\ASBESTOS_BULK\ASBESTOS BULK FORMS 2012\BULK ASBESTOS ANALYSIS SHEET_FORM #B2.doc
REVISION #23 10/25/12 BY MEI WANG FORM #B2

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

BULK ASBESTOS ANALYSIS SHEET

Client / Project: Ave Vermont / Main St P, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 3C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	___ Chrysotile	TR Cellulose	20 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI ∥: ___ ___ ___	___ Amosite	___ Fiberglass	80 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☑	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

---

2 Field Number: 4A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: W ___ ___ Extinction: ⊥ ___ ___	TR Chrysotile	TR Cellulose	30 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: 1550 ___ ___ RI ∥: 1557 ___ ___	___ Amosite	___ Fiberglass	70 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M ___ ___ Color, Pleo: Nil ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: L ___ ___ Sign: + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

---

3 Field Number: 4B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: W ___ ___ Extinction: ⊥ ___ ___	TR Chrysotile	TR Cellulose	28 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: 1548 ___ ___ RI ∥: 1554 ___ ___	___ Amosite	___ Fiberglass	72 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M ___ ___ Color, Pleo: Nil ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: L ___ ___ Sign: + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

---

4 Field Number: 4C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: W ___ ___ Extinction: ⊥ ___ ___	TR Chrysotile	TR Cellulose	32 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: 1549 ___ ___ RI ∥: 1554 ___ ___	___ Amosite	___ Fiberglass	68 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M ___ ___ Color, Pleo: Nil ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: L ___ ___ Sign: + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☑ AF TMcM		NOB PLM: ___

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vel mont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: SA

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Black Texture: NF	Morphology: W Extinction: II		Th Chrysotile	Th Cellulose	20 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: 1.550 RI II: 1.556		_____ Amosite	_____ Fiberglass	50 Organic Binders	_____ NA Residue Nfr
Gravimetric PREP ☐	# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M Color, Pleo: NP		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: L Sign: +		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

2 Field Number: SB

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Black Texture: NF	Morphology: W Extinction: II		TR Chrysotile	TR Cellulose	22 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: 1.549 RI II: 1.554		_____ Amosite	_____ Fiberglass	78 Organic Binders	_____ NA Residue Nfr
Grevimetric PREP ☐	# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M Color, Pleo: NP		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: L Sign: +		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

3 Field Number: SC

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Black Texture: NF	Morphology: W Extinction: II		TR Chrysotile	TR Cellulose	23 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: 1.548 RI II: 1.554		_____ Amosite	_____ Fiberglass	77 Organic Binders	_____ NA Residue Nfr
Gravimetric PREP ☐	# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M Color, Pleo: NP		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: L Sign: +		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

4 Field Number: 6A

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Silver Texture: NF	Morphology: _____ Extinction: _____		_____ Chrysotile	_____ Cellulose	21 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: _____ RI II: _____		_____ Amosite	_____ Fiberglass	79 Organic Binders	_____ NA Residue Nfr
Gravimetric PREP ☐	# of Layers: 1 Asbestos: ☐ ☑	DS Color: _____ Color, Pleo: _____		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: _____ Sign: _____		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vel mont / Main St J, Vel mont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 6B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Silver Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	____ Cellulose	13 Mineral Filler	____ Organic
Homogenity: M	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	82 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

2 Field Number: 6C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Silver Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	____ Cellulose	20 Mineral Filler	____ Organic
Homogenity: ____	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	80 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	OS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

3 Field Number: 7A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Black Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	TR Cellulose	32 Mineral Filler	____ Organic
Homogenity: ____	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	68 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

4 Field Number: 7B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Black Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	TR Cellulose	35 Mineral Filler	____ Organic
Homogenity: ____	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	65 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number 9C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

30 Mineral Filler
70 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number 8A

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

18 Mineral Filler
82 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☑ AF

NOB PLM: _____

---

3 Field Number 8B

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

20 Mineral Filler
80 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number 8C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

22 Mineral Filler
76 Organic Binders
2 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 — Field Number 9A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	85 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer 1 Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

2 — Field Number 9B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	85 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer 1 Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

3 — Field Number 9C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	85 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Asume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

4 — Field Number 12A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Brown Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	11 Cellulose	17 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	72 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 12B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Brown Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	8 Cellulose	17 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	75 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	____ Other	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

---

2 Field Number: 12C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Brown Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	10 Cellulose	20 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	70 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	____ Other	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

---

3 Field Number: 16A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Gray Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	TR Cellulose	10 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	____ Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	90 Other paint	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

---

4 Field Number: 16B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Gray Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	TR Cellulose	12 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	____ Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	88 Other paint	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 16C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Gray Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

13 Mineral Filler
_____ Organic Binders
0 Vermiculite
87 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number: 19A

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: White Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: _____ Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☐
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

15 Mineral Filler
_____ Organic Binders
0 Vermiculite
85 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☑ AF

NOB PLM: _____

---

3 Field Number: 19B

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: White Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: _____ Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

15 Mineral Filler
_____ Organic Binders
0 Vermiculite
85 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number: 19C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: White Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: _____ Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

15 Mineral Filler
_____ Organic Binders
0 Vermiculite
85 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC.

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 20A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	12 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers: ___ Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	88 Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐	paint	___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number: 20B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	10 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	6 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	90 Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐	paint	___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

3 Field Number: 20C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	11 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	89 Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐	paint	___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number: 21A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Beige Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	53 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	47 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	___ Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations:
NVLAP 101167-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 21B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Beige Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Comments:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	___ Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	53 Mineral Filler 47 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

2 Field Number 21C	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Beige Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Comments:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	___ Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	51 Mineral Filler 49 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

3 Field Number 22A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Black Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Comments:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	Tr Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	10 Mineral Filler 90 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

4 Field Number 22B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Grsvimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Black Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Commente:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	Tr Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	8 Mineral Filler 92 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

BULK ASBESTOS ANALYSIS SHEET

Client / Project: Ave Vermont / Main St E. Vermont Project Number: _____

Analysis Date: 2/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 22C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	10 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	90 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☒	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☒	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☒ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

2 Field Number 24A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture F	Morphology W ___ ___ Extinction 11 ___ ___	40 Chrysotile	45 Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ 1558 ___ ___ RI ∥ 1556 ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☒ ☐	DS Color B/M ___ ___ Color, Pleo M ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer C Detected Yes No	Biref C ___ ___ Sign + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☒	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☒ AF 33% Chr NOB PLM: _____

3 Field Number 24B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☐	___ Other	___ Vermiculite
Comments: 4 stop See # 24A			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

4 Field Number 24C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☐	___ Other	___ Vermiculite
Comments: 4 stop See # 24A			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 28A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	20 Mineral Filler	_____ Organic
Homogenity 4	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	80 Organic Binders	_____ NA Residue Mfr
# of Layers 1	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer _____	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

2 Field Number 28B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	22 Mineral Filler	_____ Organic
Homogenity 4	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	78 Organic Binders	_____ NA Residue Mfr
# of Layers 1	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer _____	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

3 Field Number 28C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	24 Mineral Filler	_____ Organic
Homogenity 4	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	76 Organic Binders	_____ NA Residue Mfr
# of Layers _____	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer 1	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

4 Field Number 29A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Blue/Maroon Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	38 Mineral Filler	_____ Organic
Homogenity N	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	62 Organic Binders	_____ NA Residue Mfr
# of Layers 1	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer _____	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ave Vermont / Main St E. Vermont Project Number: _____

Analysis Date: 2/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 29B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue/Maroon Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	30 Mineral Filler	_____ Organic
Homogenity: M	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	70 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

---

2 Field Number: 29C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue/Maroon Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	34 Mineral Filler	_____ Organic
Homogenity: M	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	66 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

---

3 Field Number: 30A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Beige Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	_____ Cellulose	5 Mineral Filler	_____ Organic
Homogenity: H	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	92 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	2 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

---

4 Field Number: 30B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Beige Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	_____ Cellulose	6 Mineral Filler	_____ Organic
Homogenity: H	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	94 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☑ AF — NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 — Field Number 30C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Beige; Texture NF; Homogenity 4; # of Layers _____; Color of Layer 1; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: _____ Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☐; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 10 Mineral Filler; 90 Organic Binders; 0 Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

2 — Field Number 31A

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Black; Texture NF; Homogenity 4; # of Layers 2; Color of Layer _____; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: 6 Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 20 Mineral Filler; 74 Organic Binders; 0 Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

3 — Field Number 31B

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Black; Texture NF; Homogenity 4; # of Layers 1; Color of Layer _____; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: 7 Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 23 Mineral Filler; 70 Organic Binders; _____ Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

4 — Field Number 31C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Black; Texture NF; Homogenity 4; # of Layers 2; Color of Layer _____; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: 8 Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 22 Mineral Filler; 70 Organic Binders; 0 Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

Accreditations:
NVLAP 101167-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

BULK ASBESTOS ANALYSIS SHEET

Client / Project: Ate Vermont / Main St E, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AR Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 33A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Brown Texture NF Homogenity NA # of Leyers 1 Color of Layer — Asbestos Detected Yes ☐ No ☑ Comments:	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	10 Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	15 Mineral Filler 75 Organic Binders 0 Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

2 Field Number 33B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Brown Texture NF Homogenity NA # of Layers 1 Color of Layer — Asbestos Detected Yes ☐ No ☑ Comments:	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	12 Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	18 Mineral Filler 70 Organic Binders 0 Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

3 Field Number 33C	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Brown Texture NF Homogenity 4 # of Layers ____ Color of Layer — Asbestos Detected Yes ☐ No ☑ Comments:	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	10 Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	20 Mineral Filler 70 Organic Binders 0 Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

4 Field Number 34A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Gre Texture ____ Homogenity ____ # of Layers ____ Color of Layer ____ Asbestos Detected Yes ☐ No ☐ Comments: NO Sample	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	____ Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Mineral Filler ____ Organic Binders ____ Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 3SA

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: L-Gray Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	TR Cellulose	10 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	90 Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☒ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

2 Field Number: 3SB

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: L-Gray Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	TR Cellulose	15 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	85 Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☒ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

3 Field Number: 3SC

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: L-Gray Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	TR Cellulose	12 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	88 Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☒ Fiberglass Isotopic ☒ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☒ AF		NOB PLM: ____

4 Field Number: 3SA

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Beige Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	2 Cellulose	98 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	____ Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 2/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number 38B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Beige Texture F	Morphology ___ Extinction ___	___ Chrysotile	3 Cellulose	97 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number 38C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Beige Texture F	Morphology ___ Extinction ___	___ Chrysotile	4 Cellulose	96 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Grevimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

3 Field Number 40A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color D-Gray Texture NF	Morphology ___ Extinction ___	___ Chrysotile	TR Cellulose	28 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	72 Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Asaume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number 40B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color D-Gray Texture NF	Morphology ___ Extinction ___	___ Chrysotile	TR Cellulose	30 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	70 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10679
Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT
TEMPERATURE °c 25

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____
Analysis Date: 12/21/12 Analyst: Af Batch Number: 25538

1 Field Number 40C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color D-Grey Texture NF
Homogenity 4
# of Layers 1 Asbestos ☐ ☑
Color of Layer _____ Detected Yes No
Comments:

PLM Optical Properties
Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %
_____ Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
32 Mineral Filler
68 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

2 Field Number 42A

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color L-Grey Texture F
Homogenity 4
# of Layers 1 Asbestos ☑ ☐
Color of Layer _____ Detected Yes No
Comments:

PLM Optical Properties
Morphology W Extinction ∥
RI ⊥ 1.547 RI ∥ 1.554
DS Color B/M Color, Pleo M
Biref C Sign +

Asbestos Results PLM %
33 Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
67 Mineral Filler
_____ Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

3 Field Number 42B

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color _____ Texture _____
Homogenity _____
# of Layers _____ Asbestos ☐ ☐
Color of Layer _____ Detected Yes No
Comments: + stop See # 42A

PLM Optical Properties
Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %
_____ Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
_____ Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☐
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
_____ Mineral Filler
_____ Organic Binders
_____ Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

4 Field Number 42C

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color _____ Texture _____
Homogenity _____
# of Layers _____ Asbestos ☐ ☐
Color of Layer _____ Detected Yes No
Comments: + stop See # 42A

PLM Optical Properties
Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %
_____ Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
_____ Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☐
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
_____ Mineral Filler
_____ Organic Binders
_____ Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ate Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 44A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ Extinction ___	___ Chrysotile	2 Cellulose	10 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	5 Fiberglass	83 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	2 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☑ AF — NOB PLM: _____

2 Field Number

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ Extinction ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ Color, Pleo ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

3 Field Number

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ Extinction ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ Color, Pleo ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

4 Field Number

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ Extinction ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ Color, Pleo ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

ATC ASSOCIATES INC.

INTRALABORATORY AND INTERLABORATORY QC SHEET

ASBESTOS LABORATORY QUALITY CONTROL PROGRAM
DATA ENTRY SHEET FOR BULK SAMPLES
10% Recounts

	DATE	ANALYST INITIALS	SAMPLE #	BATCH #	QC #	% ASB	P/F	INTERLABORATORY/ CORRECTIVE ACTIONS
O:	12/21/12	AF	1B	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF 2	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 2	ND		
O:	12/21/12	AF	4C	25538	[redacted]	Tr Chr		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF3	Tr Chr	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 3	Tr Chr		
O:	12/21/12	AF	8A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF4	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 4	ND		
O:	12/21/12	AF	19A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF5	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 5	ND		
O:	12/21/12	AF	24A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF6	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 6	ND		
O:	12/21/12	AF	30A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF7	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF7	ND		
O:	12/21/12	AF	35C	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF8	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 8	ND		
O:	12/21/12	AF	44A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF9	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 9	ND		

NOTE:

Intra-Analyst QC: R= |(O-B) / ((O+B)/2)|

IF R > 1.0 REJECT

O=Original Count

Inter-Analyst QC: R= (O-D) / ((O+D)/2)

IF R > 1.0 or < -1.0 REJECT

B=Blind Count by same analyst (Duplicate)

D= Duplicate by second analyst (Replicate)

Cardno ATC

Page 1 of 6

BATCH NO. 25538

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST. JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/19/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☒ email results to: Harland.Miller@Cardno.com

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H1	01A	DOOR CAULKING			NORTH DOOR BASEMENT LEVEL		
	01B	GRAY -			SAME AS 01A		
	01C	(EXTERIOR)			SAME AS 01A		
H2	02A	WINDOW			NORTH SIDE CENTER WINDOW BASEMENT		
	02B	CAULKING - WHITE			NORTHSIDE WEST END 1ST FLOOR		
	02C	(EXTERIOR)			NORTH WEST CORNER WINDOW		
H3	03A	WINDOW			NORTH SIDE @ STAIRS BASEMENT LEVEL		
	03B	GLAZING			NORTH SIDE BASEMENT BY STAIRS		
	03C	(EXTERIOR)			SOUTHSIDE, EAST CORNER		
H4	04A	WINDOW			NORTH SIDE CENTER OF FRONT BLDG		
	04B	CAULKING			WINDOW BY STAIRS NORTH SIDE		
	04C	WHITE (EXTERIOR)			FRONT OF BLDG EAST NE CORNER		
H5	05A	TAR COATING			@ North Door (Gym)		
	05B	ON BRICK			↓		
	05C	(EXTERIOR)			↓		
H6	06A	SILVER COATED			@ South Garage		
	06B	FLASHING			↓		
	06C	(EXT. ROOF)			↓		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/18/12	1800	ATC S. HASAN	12/18/12	5:00 P.M
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
24a. Analyzed By:	12/21/12	11:30 P.M
24b. Analyzed By:		
24c. QC By:		

27. Comments (Lab) PLM QC BY 12/21/12

Cardno ATC

BATCH NO. 25538 ✓

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST. JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/9/12	ST J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER / ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H7	07A	Built up Tar Roof			@ Hatch		
	07B	↓			@ South Parapet Drain		
	07C	↓			@ Center of Roof		
H8	08A	Roofing Felt			See 07A		
	08B	↓			See 07B		
	08C	↓			See 07C		
H9	09A	Black Caulk @ gambrel			@ gambrel N		
	09B	↓			@ Gambrel S		
	09C	↓			@ Gambrel Center		
H10	10A	VOID					
	10B	↓					
	10C	↓					

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/9/12	1800	ATC S. HASAN	12/20/12	9:00 PM
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	ATC	25. Date	26. Time
24a. Analyzed By:		12/11/12	11:55PM
24b. Analyzed By:			
24c. QC By:			

27. Comments (Lab) QC BP

Cardno ATC

Page 3 of 6

BATCH NO. 255381

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBBEY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/19/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER / ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H11	11A	PLASTER			NO SAMPLES		
H12	12A	CARPET			ROOM 11 WEST END		
	12B	MASTIC			ROOM 11 @ STAIRS		
	12C	(1ST FLOOR)			ROOM 11 OUTSID RM 15		
H13	13A	GYPSUM WALLBD			NO SAMPLES		
H14	14A	JNT CMPND			NO SAMPLES		
H15	15A	DOOR INSULATION			NO SAMPLES		
H16	16A	FLOOR PAINT			ROOM 23 @ DOOR TO STAIRS		
	16B	GRAY			ROOM 23 SOUTH END		
	16C	(BASEMENT)			ROOM 25 @ ROOM 22		
H17	17A	VOID			NO SAMPLE		
H18	18A	CEILING PANELS			NO SAMPLE		
H19	19A	WALL PAINT			SAME AS 20C		
	19B	WHITE			SAME AS 20B		
	19C	(ON BRICK)			SAME AS 20A		
H20	20A	FLOOR PAINT			ROOM 26 @ DOOR		
	20B	BLUE			ROOM 26 CENTER		
	20C	(BASEMENT)			ROOM 26 WEST END		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/19/12	1800	ATC S. HASAN	12/20/12	5:00 P.M
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
24a. Analyzed By:	12/21/12	11:59 AM
24b. Analyzed By:		
24c. QC By:		

27. Comments (Lab) OCB

Cardno ATG

Page 4 of 6

BATCH NO. 25538

171 Commerce Street | PO Box 1485 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LUBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/9/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H21	21A	12x12 FLOOR			ROOM 18 CENTER		
	21B	TILE -			ROOM 18 @ ROOM 19		
	21C	BEIGE			ROOM 18 WESTSIDE CENTER		
H22	22A	MASTIC W/			SAME AS 21A		
	22B	H21			SAME AS 21B		
	22C	↓			SAME AS 21C		
H23	23A	CARPET MASTIC			NO SAMPLE		
H24	24A	6"OD AIR			ROOM 27 SAFE AREA		
	24B	CEL PIPE			ROOM 25 @ DOOR TO ROOM 18		
	24C	INSULATION			ROOM 29 CENTER		
H25	25A	2x4 PRESSED BOARD			NO SAMPLE		
H26	26A	BRICK - FIRE			NO SAMPLE		
H27	27A	VOID			NO SAMPLE		
H28	28A	COATING ON			SOUTHSIDE GYM @ SW CENTER WINDOW		
	28B	BRICK AS			SOUTHSIDE GYM @ SW WINDOW		
	28C	WINDOW SILL			SOUTHSIDE GYM @ SW CENTER CORNER		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/9/12	1200	ATC S. HASAN	12/20/12	S.HASAN
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
24a. Analyzed By:	12/21/12	11:57 PM
24b. Analyzed By:		

27. Comments (Lab) DC BY

Cardno ATC

Page 5 of 6

BATCH NO. 25538

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/19/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H29	29A	RSF - BLUE			ROOM 12 EAST WALL		
	29B	MAROON			ROOM 12 EAST WALL		
	29C	↓			ROOM 12 EAST WALL		
H30	30A	MASTIC ASSOC			SAME AS 29A		
	30B	W/ H29			SAME AS 29B		
	30C	↓			SAME AS 29C		
H31	31A	STAIR RISERS			FIRST FLOOR @ BOTTOM OF STAIR		
	31B	BLACK			FIRST FLOOR @ TOP OF STAIRS		
	31C	↓			BASEMENT STAIRS		
H32	32A	VOID			NO SAMPLE		
H33	33A	GLUE DABS			ROOM 25 @ DOOR SAPE		
	33B	LT. BROWN			SAME AS 33A		
	33C	↓			SAME AS 33A		
H34	34A	VIBRATION CLOTH			NO SAMPLE		
H35	35A	BLOWN IN			ROOM 18 CENTER		
	35B	INSULATION			ROOM 18 CENTER		
	35C	↓			ROOM 29 EAST SIDE		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I ~~~	12/19/12	1800	ATC S. HASAN	12/20/12	9:00 P.M
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
ATC		
24a. Analyzed By:	12/21/12	11:55 PM
24b. Analyzed By:		

27. Comments (Lab) QC BY

Cardno ATC

BATCH NO. 25538

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/9/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H36	36A	BOILER INSULATION			NO SAMPLE		
H37	37A	INSULATION-BOILER DOOR			NO SAMPLE		
H38	38A	DEBRIS			TOP OF BOILER RM 20		
	38B	↓			TOP OF HOT WATER TANK RM 20		
	38C	↓			TOP OF EXHAUST RM 20		
H39	39A	MASTIC ON BASEMENT FLOOR			NO SAMPLE		
H40	40A	PUTTY ON			EAST WALL CENTER RM 21		
	40B	PIPE			SAME AS 40A		
	40C	↓			SAME AS 40A		
H41	41A	SHEET FLOORING BROWN			NO SAMPLE		
H42	42A	MUD 6TH FL			SAME AS 24A		
	42B	ASSOC W/			SAME AS 24B		
	42C	H24			SAME AS 24C		
H43	43A	BOILER INTERNALS			NO SAMPLE		
H44	44A	BOILER GASKET			@ FRONT OF BOILER		
H45							

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/9/12	1600	ATC S. HASAN	12/20/12	5:00 PM
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
ATC		
24a. Analyzed By:	12/21/12	11:59 PM
24b. Analyzed By:		

27. Comments (Lab) QC'd

Appendix B

PCB Sample Location Diagram
List of Suspect PCB-Containing Materials
PCB Laboratory Report

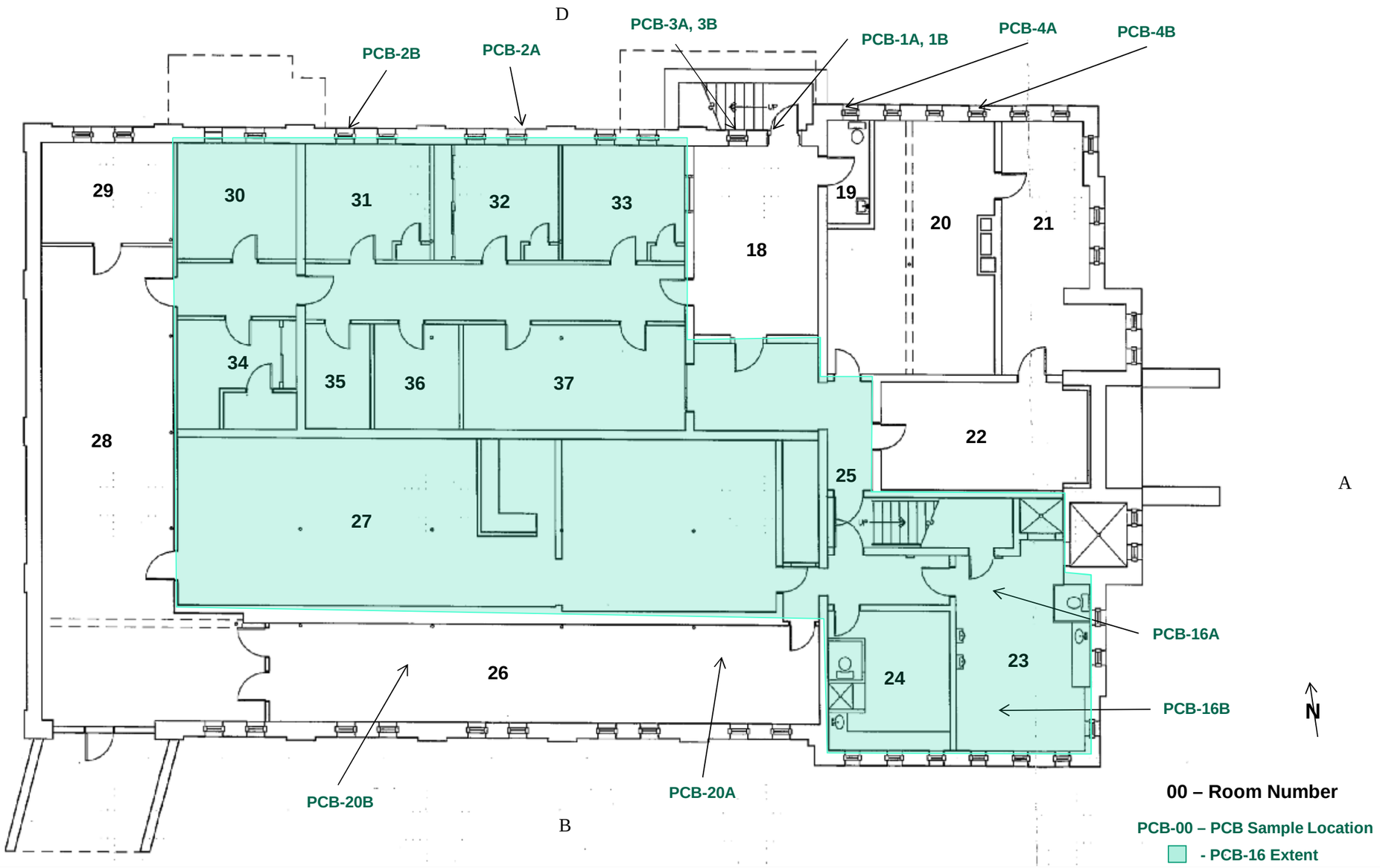
PCB Sample Location Diagram

D

C

A

B



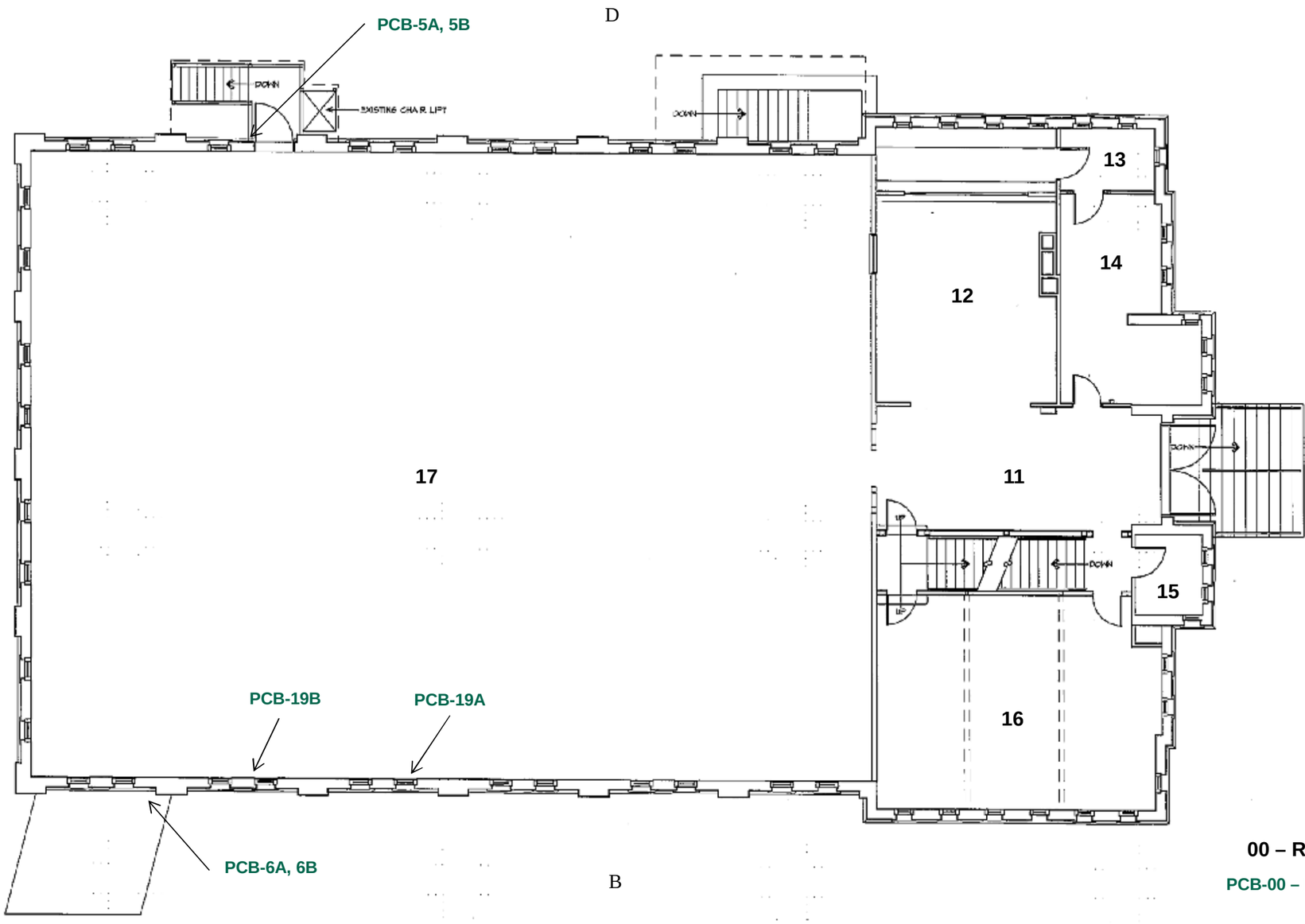
SAMPLE LOCATION DIAGRAM – PCB's

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM – PCB's

Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

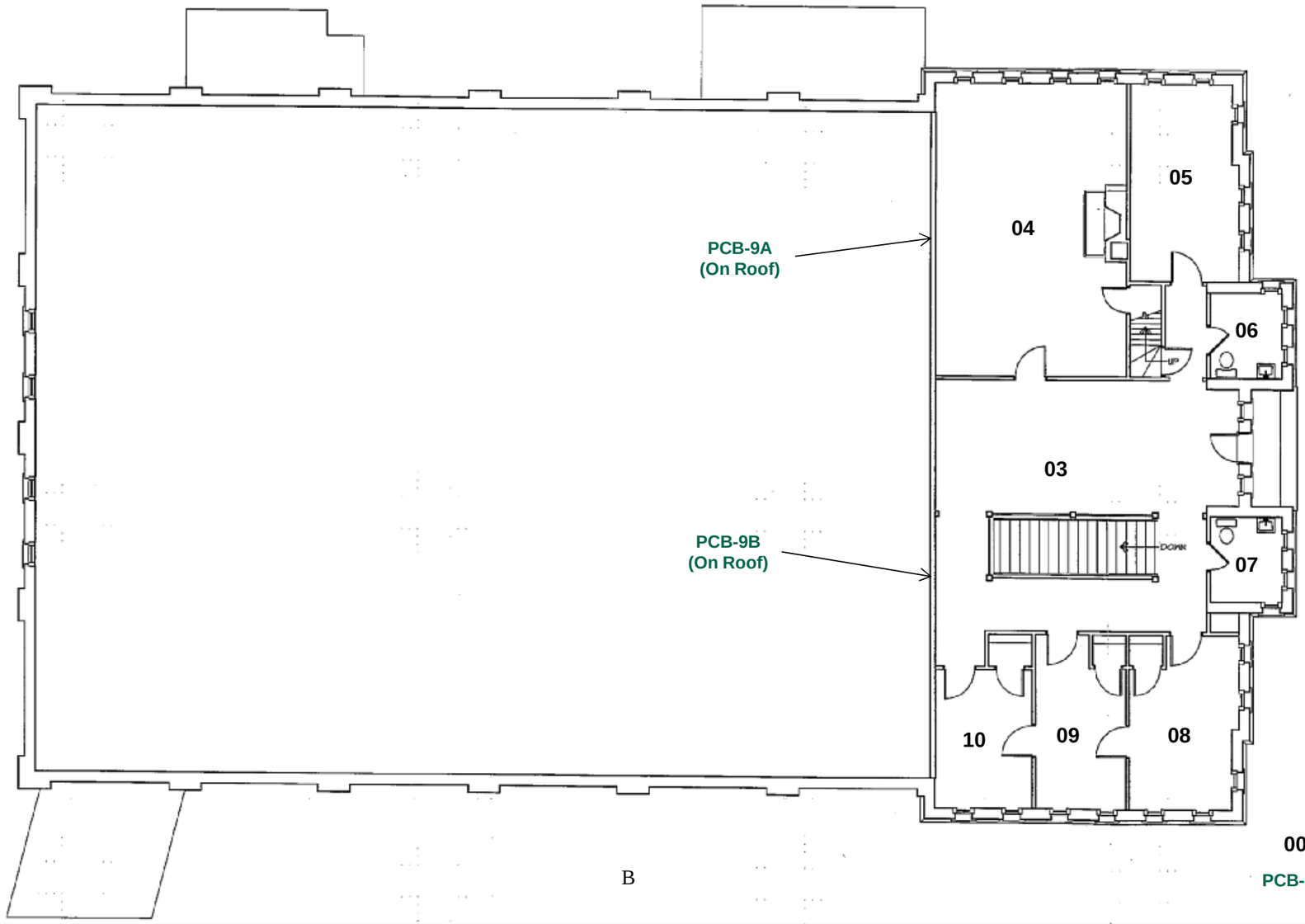
SOURCE : Field Notes

SCALE: Not to scale

D

C

A



B

00 – Room Number

PCB-00 – PCB Sample Location

SAMPLE LOCATION DIAGRAM – PCB's

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future

171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

List of Suspect PCB-Containing Materials

List of Suspect PCB Containing Materials
Former St. Johnsbury Armory – Caulk & Paint Materials
Cardno ATC Project # 63.35078.0013
December 17, 2012

Material Description	Results (ppm)	Sample Number
Exterior Door Caulking - Gray	12-14 ppm	PCB-1A-1B
Exterior Window Caulking - White	1.5 ppm	PCB-2A-2B
Window Glazing - White	ND	PCB-3A-3B
Exterior Window Caulking - White	3.5-26 ppm	PCB-4A-4B
Tar Caulking	ND	PCB-5A-5B
Roof Flashing - Silver	ND	PCB-6A-6B
Roof Caulking - Black	ND	PCB-9A-9B
Floor Paint - Gray	**4700-5700 ppm**	**PCB-16A-16C**
Wall Paint - White	7.4 ppm	PCB-19A-19B
Floor Paint - Blue	27-44 ppm	PCB-20A-20B

ND – None Detected

PCB Laboratory Report

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405

12/31/2012

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/27/2012. The results are tabulated on the attached data pages for the following client designated project:

63.35078.0013

The reference number for these samples is EMSL Order #011205781. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director

The test results contained within this report meet the requirements of NELAC and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10896, PA 68-00367

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 1A — ***Collected:*** 12/17/2012 10:05:00 AM — ***Lab ID:*** *0001*
H1 - Door Caulking Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	12	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 1B — ***Collected:*** 12/17/2012 10:06:00 AM — ***Lab ID:*** *0002*
H1 - Door Caulking Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	14	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 2A — ***Collected:*** 12/17/2012 10:15:00 AM — ***Lab ID:*** *0003*
H2 - Window Caulk White

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	1.5	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 2B
H2 - Window Caulk White
Collected: 12/17/2012 10:20:00 AM ***Lab ID:*** *0004*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 3A
H3 - Window Glaze
Collected: 12/17/2012 10:22:00 AM ***Lab ID:*** *0005*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 3B
H3 - Window Glaze
Collected: 12/17/2012 10:26:00 AM ***Lab ID:*** *0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 4A — ***Collected:*** 12/17/2012 10:31:00 AM — ***Lab ID:*** *0007*
H4 - Window Caulk

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	26	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 4B — ***Collected:*** 12/17/2012 10:35:00 AM — ***Lab ID:*** *0008*
H4 - Window Caulk

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	3.5	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 5A — ***Collected:*** 12/17/2012 10:40:00 AM — ***Lab ID:*** *0009*
H5 - Tar Caulking

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 5B
H5 - Tar Caulking
Collected: 12/17/2012 10:42:00 AM ***Lab ID:*** *0010*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 6A
H6 - Silver Flashing
Collected: 12/17/2012 11:01:00 AM ***Lab ID:*** *0011*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 6B
H6 - Silver Flashing
Collected: 12/17/2012 11:02:00 AM ***Lab ID:*** *0012*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Project: **63.35078.0013**

Analytical Results

Client Sample Description 16B — ***Collected:*** 12/17/2012 11:40:00 AM — ***Lab ID:*** *0016*
H16 - Floor Paint Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	4600	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 16C — ***Collected:*** 12/17/2012 11:49:00 AM — ***Lab ID:*** *0017*
H16 - Floor Paint Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	5700	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 19A — ***Collected:*** 12/17/2012 11:55:00 AM — ***Lab ID:*** *0018*
H19 - White Wall Paint

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	7.4	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 19B — ***Collected:*** 12/17/2012 ***Lab ID:*** *0019*
H19 - White Wall Paint — 11:55:00 AM

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	7.4	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 20A — ***Collected:*** 12/17/2012 ***Lab ID:*** *0020*
H20 - Blue Floor Paint — 12:05:00 PM

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	27	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 20B — ***Collected:*** 12/17/2012 ***Lab ID:*** *0021*
H20 - Blue Floor Paint — 12:06:00 PM

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	44	5.5	mg/Kg	12/27/2012	RS	12/31/2012	EH
3540C/8082A	Aroclor-1260	ND	5.5	mg/Kg	12/27/2012	RS	12/31/2012	EH
3540C/8082A	Aroclor-1262	ND	5.5	mg/Kg	12/27/2012	RS	12/31/2012	EH
3540C/8082A	Aroclor-1268	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order:	011205781
CustomerID:	ATCE53
CustomerPO:	
ProjectID:	

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

01205781

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: S. Goff	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone:	E-Mail:		Page: 1 of 2
Company: Cardno ATC				Job #:
Address: 171 Commerce St.	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495				
Phone: 802 862 1980	PO #:			
Email: Harland.Miller@Cardno.com	WO #:			
Project Name: St. J Armory	Project #: 63. 35078.0013			
Site: St. Johnsbury VT	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

	Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SW846 - 8082 WITH (3540 PREP)	Total Number of containers	Sample #'s / Special Instructions/Note:
			Preservation Code:							
1	H1 - Door Caulking Grey	12/17	~~1005~~	G	S			X		1A
2	" "		1006							1B
3	H2 - Window Caulk White		~~1015~~							2A
4	" "		1020							2B
5	H3 - Window Glaze		1022							3A
6	" "		1026							3B
7	H4 - Window Caulk		1031							4A
8	" "		1035							4B
9	H5 - Tar Caulking		1040							5A
10	" "		1042							5B
11	H6 - Silver Flashing		1101							6A

per Steve - 21 separate samples, Do Not Composite
12/27 11:10AM - TA

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time: 12/19/12	Company: Cardno	Received by:	Date/Time: 12/19/12 1530	Company: TAB
Relinquished by:	Date/Time: 12/26/12 1055	Company: TABUR	Received by:	Date/Time: 12/26/12 1116	Company: Cardno
Relinquished by:	Date/Time:	Company	Received by: Travis Calbert	Date/Time: 12/27/12 10:00AM	Company: EMSL

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

0112057 81

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: S. Goff	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone:	E-Mail:		Page: 2 of 2
Company: Cardno ATC				Job #:
Address: 171 Commerce St.	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495				
Phone: 802 862 1980	PO #:			
Email: Harland.Miller@Cardno.com	WO #:			
Project Name: St. J Armory	Project #: 63. 35078.0013			
Site: St. Johnsbury VT	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

	Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SW 846 8082 with 3540 prep	Total Number of containers	Special Instructions/Note:
				Preservation Code:						Sample #'s
12	H6 - Silver Flashing	12/17	1102	G	S			X		6B
13	H9 - Black Roof Caulk		1140							9A
14	H9 " "		1140							9B
15	H16 - Floor Paint Grey		1145							16A
16	" "		1149							16B
17	" "		1149							16C
18	H19 - White Wall Paint		1155							19A
19	" "		1155							19B
20	H20 - Blue Floor Paint		1205							20A
21	" "		1206							20B

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

	Date/Time	Company		Date/Time	Company
Relinquished by:	12/26/12 1055	TA BUR	Received by:	12-26-12 1110	Cardno
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Travis Albert	12/27/12 10:00AM	EMSL

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Appendix C

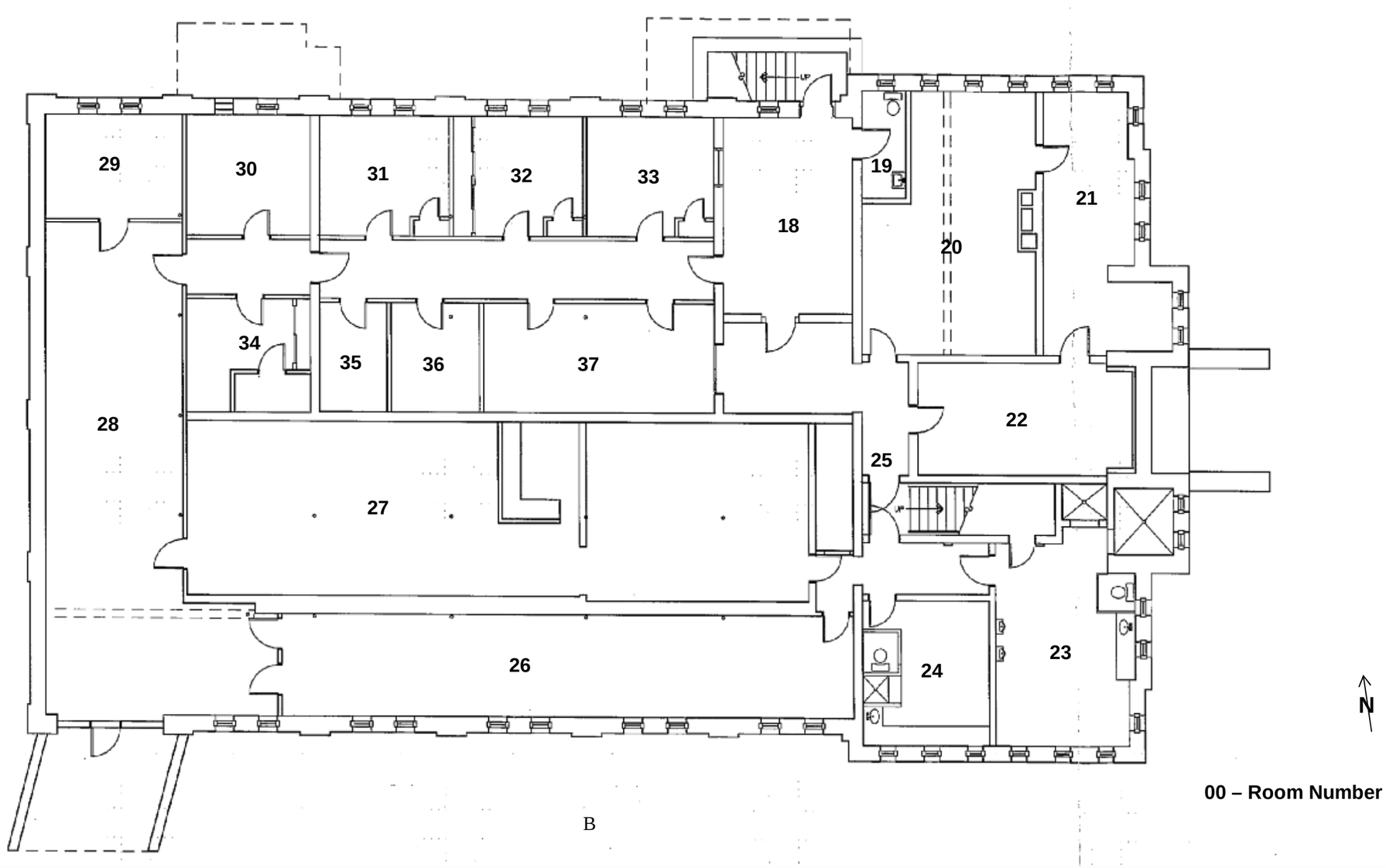
Building Diagram with Room Numbers
XRF Field Sheets
XRF Protocol
Performance Characteristic Sheet
XRF QA/QC Results

Building Diagram with Room Numbers

D

C

A



B

00 – Room Number

SAMPLE LOCATION DIAGRAM

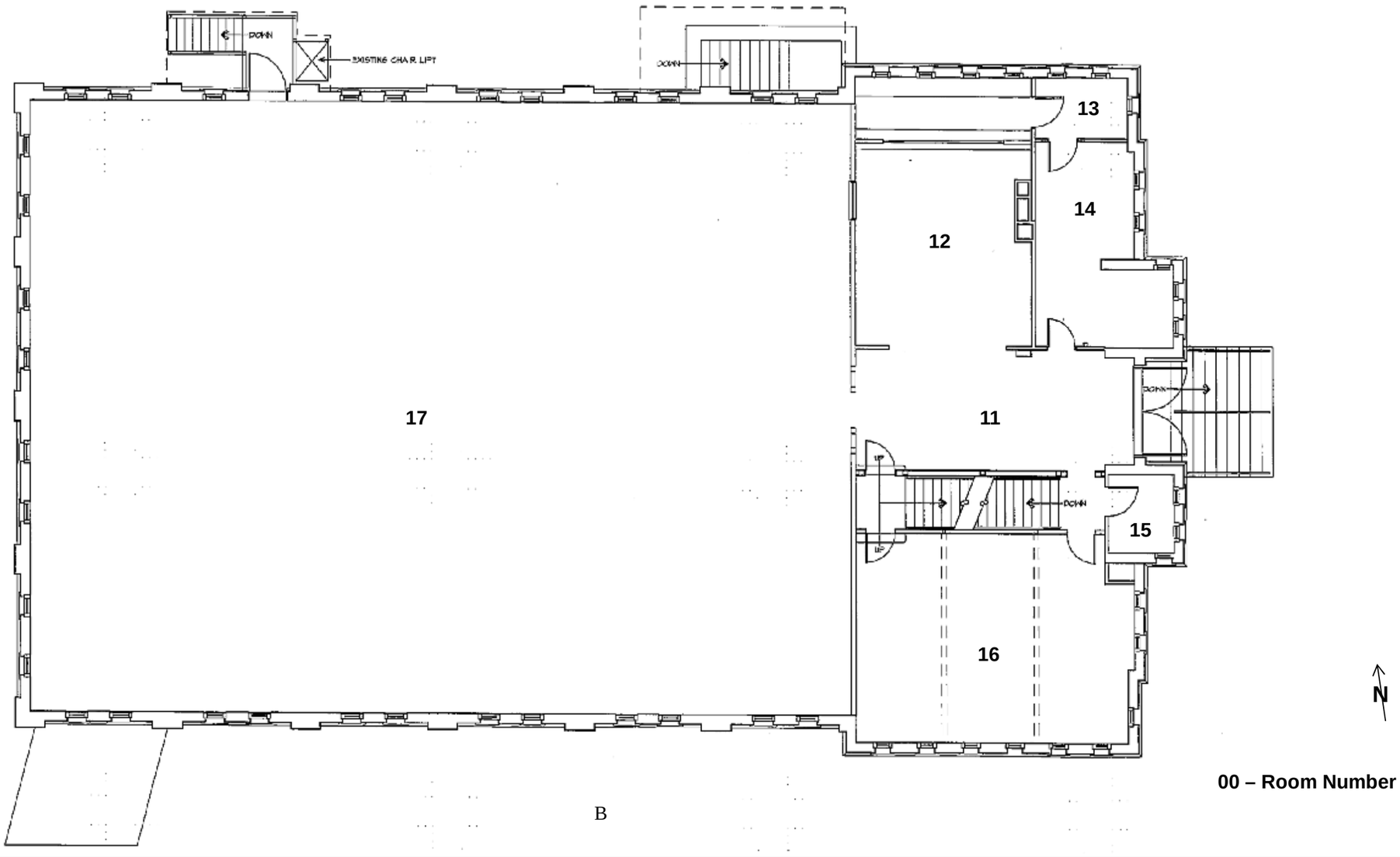
Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

D



C

A

B

SAMPLE LOCATION DIAGRAM

Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

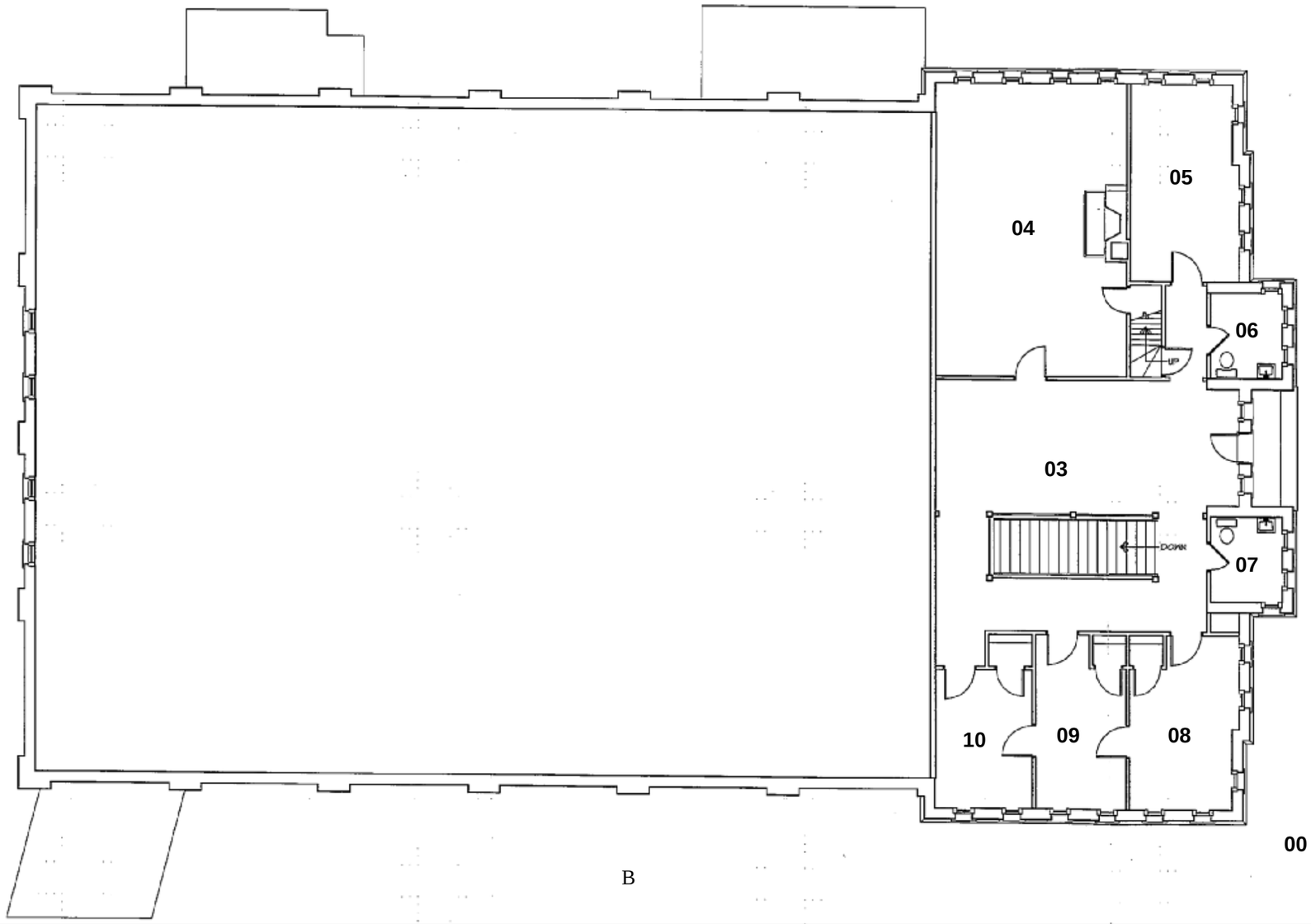
SOURCE : Field Notes

SCALE: Not to scale

D

C

A



B

00 – Room Number

SAMPLE LOCATION DIAGRAM

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

XRF Field Sheets

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 3 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.0					
Crown Molding										
Wall	F	P	W	A	0.3					
Wall	↓	↓	↓	B	0.7					
Wall	↓	↓	↓	C	0.7					
Wall	↓	↓	↓	D	0.6					
Baseboard / Assoc. Trim	F	W	BR	A	0.2		A4			
Floor	F	W	S		0.1					
Radiator/Rad Cover	F	M	Silver		0.0					
Shelves										
DOOR TYPE 1										
Door	F	W	BR	A2	0.1		A11			
Casing	↓	↓	↓	↓	0.2		↓			
Jamb	↓	↓	↓	↓	0.1		↓			
Stop	↓	↓	↓	↓	0.3		↓			
Threshold										
DOOR TYPE 2										
Door	F	W	BR	B1	0.0					
Casing	↓	↓	↓	↓						
Jamb	↓	↓	↓	↓						
Stop	↓	↓	↓	↓						
Threshold										
WINDOW TYPE 1										
Casing/Apron	F	W	BR	A1	0.0		A11			
Stop	G	W	BR		0.1					
Jamb	P	W	—		0.2					
Window Well	F	W	W		>9.9					LBP
Sill	F	W	BR		0.3					
Sash/Mullion	F	W	BR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Railing	G	W	BR		0.1					

CALIBRATIONS TIME: 1000 12/10/12

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	0.0	2nd Reading:	0.1	3rd Reading:	0.0

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE	St. Johnsbury Armory
PROJECT ADDRESS	St. Johnsbury, Vermont
INSPECTOR	Harland Miller
DATE	December 10 2012
ROOM #: 4	Use:

LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	D	W		0.0					
Crown Molding	G	W	W	A	0.1		A 11			
Wall	G	P	Gr/BL	A	0.2	0.7				
Wall	↓	↓	↓	B	-0.3					
Wall				C	0.0					
Wall				D	0.2					
Baseboard / Assoc. Trim	G	W	BR		0.1					
Floor	G	W	S		-0.1					
Radiator/Rad Cover	G	M	Silver	D	0.0					
Shelves										
DOOR TYPE 1										
Door	G	W	BR	A	0.1		A11			
Casing	↓	↓	↓	↓	0.2					
Jamb					-0.1					
Stop					0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G P	W	BR	D1	0.1		A 11			
Stop	G	W	BR	↓	0.0		↓			
Jamb	~~G~~ P	W	BR		0.2					
Window Well	P	W	W		>9.9					LBP
Sill	F	W	BR		0.2					
Sash/Mullion	F	W	BR	↓	0.1		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Fire door	G	W	BR		0.0					
closet wall	G	P	W	A	0.2					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION	SUBSTRATE					
G = GOOD (NO VISABLE DAMAGE)	P = PLASTER	B = BRICK	WP = WALLPAPER		PP = PURPLE
F = FAIR (LESS THAN 10% DAMAGE)	SR = SHEETROCK	C = CONRETE	V = VARNISH	C = CREAM	Y = YELLOW
P = POOR (GREATER THAN 10% DAMAGE	W = WOOD	O = OTHER	S = STAIN	T = TAN	R = RED
	M = METAL		BL = BLUE	GY = GREY	P = PINK
	CPT = CARPETED		BLK = BLACK	GR = GREEN	BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 5 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	D	W		0.1					
Crown Molding										
Wall	G	W	S	A	0.7					
Wall	↓	↓	↓	B	0.0					
Wall	↓	↓	↓	C	0.1					
Wall	↓	↓	↓	D	0.1					
Baseboard / Assoc. Trim	G	W	W		0.0					
Floor	G	CPT	BR		0.2					
Radiator/Rad Cover	G	M	Silver		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	W	B	0.3					
Casing	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.0					
Stop	↓	↓	↓ BR	↓	0.2					
Threshold										
DOOR TYPE 2										
Door	G	W	W	B	0.0					
Casing	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.2					
Stop	G	W	W DR	↓	0.1					
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W	A1	0.1		A H			
Stop	G	W	W	↓	0.2					
Jamb	F	W	W	↓	0.1					
Window Well	P	W	W	↓	0.3					
Sill	G	W	W	↓	0.1					
Sash/Mullion	G	W	W	↓	0.3					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

9 of type 1

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP = WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 2012

ROOM #: 6 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.0					
Crown Molding										
Wall	G	P	BR	A	0.2					
Wall	↓	↓	↓	B	-0.1					
Wall				C	0.1					
Wall				D	0.0					
Baseboard / Assoc. Trim	G	P/W	BR	A	-0.3					
Floor	G	W	G		0.1					
Radiator/Rad Cover	F	M	Silver	A	0.0					
Shelves										
DOOR TYPE 1										
Door	G F	W	BR	C	0.2					
Casing	G	↓	↓	↓	0.1					
Jamb	G				0.0					
Stop	G				0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G P	W	BR	D1	0.2		AH			
Stop	G	W	BR		0.1		↓			
Jamb	F	W	BR	↓	-0.3					
Window Well	P	W	W		0.1					
Sill	F	W	BR		0.0					
Sash/Mullion	F	W	BR	↓	0.3					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 7 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	SR	W		0.0					
Crown Molding	G	W	W	D	-0.2		All			
Wall	G	P	BR	A	0.0					
Wall	G	P	BR	B	0.1					
Wall	↓	↓	↓	C	-0.0					
Wall	↓	↓	↓	D	0.2					
Baseboard / Assoc. Trim	G	W	BR		0.1					
Floor	G	W	S		0.0					
Radiator/Rad Cover	G	M	Silver		0.7					
Shelves										
DOOR TYPE 1										
Door	G	W	BR	C	-0.3					
Casing	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.3					
Stop	↓	↓	↓	↓	0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	P	W	BR	A1	-0.1		All			
Stop	G	W	BR	↓	0.0		↓			
Jamb	F	W	BR	↓	0.2		↓			
Window Well	P	W	W	↓	39.9		↓			LBP
Sill	F	W	BR	↓	0.1		↓			
Sash/Mullion	F	W	BR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 8 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.2					
Crown Molding	G	W	W	A	0.1		A-4			
Wall	G	P	Y	A	-0.2					
Wall	↓	↓	↓	B	0.1					
Wall				C	0.0					
Wall				D	0.2					
Baseboard / Assoc. Trim	G	W	R	A	-0.1		A-1			
Floor	G	W	S		0.1					
Radiator/Rad Cover	G	M	Silver		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	R	D	-0.0		A-1			
Casing	↓	↓	↓	↓	0.2		↓			
Jamb					0.1					
Stop					0.2					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	R	A-1	-0.1		A-1			
Stop	G	W	R	↓	0.1		↓			
Jamb	F	W	R		0.3					
Window Well	P	W	W		>9.9					LBP
Sill	G	W	R		0.1					
Sash/Mullion	G	W	R	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 9 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.3					
Crown Molding	G	W	W	D	-0.2		A-11			
Wall	G	P	W	A	0.1					
Wall	↓	↓	↓	B	0.2					
Wall				C	-0.1					
Wall				D	0.0					
Baseboard / Assoc. Trim	G	W	BLU	C	0.1		A-11			
Floor	G	W	S		0.2					
Radiator/Rad Cover	G	M	[illegible]		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	BLU	D1	-0.3		D2			
Casing	↓	↓	↓	↓	0.4		↓			
Jamb					0.2					
Stop			BR		0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	F P	W	BLU	B1	-0.3		A11			
Stop	G	W	BLU	↓	0.1		↓			
Jamb	F	W	BLU		0.0					
Window Well	P	W	W		79.9					LBP
Sill	F	W	W		0.0					
Sash/Mullion	F	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 16 2012

ROOM #: 16 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	F	PW	W		0.0					
Crown Molding	G	W	W		0.2					
Wall	P	P	W	A	2.1					
Wall	↓	↓	↓	B	0.0					
Wall				C	0.0					
Wall				D	0.3					
Baseboard / Assoc. Trim	F	W	W	C	0.3		All			
Floor	G	W	S		0.1					
Radiator/Rad Cover	F	M	silver		0.2					
Shelves										
DOOR TYPE 1										
Door	F P	W	W	B1	0.1		All			
Casing	↓	↓	↓	↓	0.3		↓			
Jamb					0.1					
Stop	F	W	BR		0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	P	W	W	B1	0.0		All			
Stop	F	W	W	↓	0.2					
Jamb	F	W	W		0.1					
Window Well	P	W	W		79.9					LBP
Sill	P	W	W		0.0					
Sash/Mullion	F	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME: 1230

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.1	3rd Reading:	1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	0.0	2nd Reading:	0.0	3rd Reading:	0.1

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 19, 2012

ROOM #: 11 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	SR	W		0.3					
Crown Molding										
Wall	G	SR	W	A	0.1					
Wall	↓	↓	↓	B	0.2					
Wall	↓	↓	↓	C	0.1					
Wall	↓	↓	↓	D	0.0					
Baseboard / Assoc. Trim	G	W	GR	A	-0.0		A-11			
Floor	P	W	S		0.2					
Radiator/Rad Cover	G	M	GY	B	0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	S	DL	0.0					
Casing	G	W	GR	↓	0.0					
Jamb	G	W	GR	↓	0.0					
Stop	G	W	GR	↓	0.1					
Threshold										
DOOR TYPE 2										
Door	G	W	W	A1	-0.2					
Casing	G	W	GR	↓	0.3					
Jamb	G	W	GR	↓	0.1					
Stop	G	W	GR	↓	0.2					
Threshold										
WINDOW TYPE 1										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory
PROJECT ADDRESS: St. Johnsbury, Vermont
INSPECTOR: Harland Miller
DATE: December 19 2012
ROOM #: 12 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G-F	SR	W		0.3					
Crown Molding										
Wall	G	SR	W	A	-0.2					
Wall	↓	↓	↓	B	0.1					
Wall	↓	↓	↓	C	0.0					
Wall	↓	↓	↓	D	-0.3					
Baseboard / Assoc. Trim	G	W	GR	C	0.1		A11			
Floor	G	CPT	R		0.2					
Radiator/Rad Cover					0.0					
Shelves Bar	G	W	S	D	0.0					
DOOR TYPE 1										
Door	G	W	GY	A	0.2					
Casing	G	W	GR	↓	0.1					
Jamb	G	W	GR	↓	0.3					
Stop	G	W	GR	↓	0.3					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	DR	0.1		A11			
Stop	↓	↓	↓	↓	0.3		↓			
Jamb	↓	↓	↓	↓	-0.2		↓			
Window Well	P	W	W	↓	>9.9		↓			LBP
Sill	G	W	GR	↓	0.0		↓			
Sash/Mullion	G	W	GR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 13 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.3					
Crown Molding	G	W	W	A	0.11		A+1			
Wall upper	G	P	GR	A	0.2					
Wall	↓	↓	↓	B	0.1					
Wall				C	0.2					
Wall	↓	↓	↓	D	0.0					
Baseboard / Assoc. Trim	G	W	GR		0.2					
Floor	G	CPT	BLU		0.1					
Radiator/Rad Cover	G	M	Silver	D	-0.3					
Shelves										
DOOR TYPE 1										
Door	G	W	W	C	0.1					
Casing	G	W	GR	↓	0.0		B			
Jamb	↓	↓	↓	↓	0.2		↓			
Stop					0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	A	-0.2		A+1			
Stop	↓	↓	↓		0.1					
Jamb				↓	0.0		↓			
Window Well	P	W	W		79.9					LBP
Sill	G	W	GR		0.0					
Sash/Mullion	G	W	GR	↓	0.3		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
well lower	G	P	GR	A	0.2					
↓	↓	↓	↓	B	0.1					
				C	0.3					
				D	0.0					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 14 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	SR	W		0.0					
Crown Molding										
Wall	G	SR	W	A	0.2					
Wall	↓	↓	↓	B	0.3					
Wall	↓	↓	↓	C	-0.1					
Wall	↓	↓	↓	D	0.2					
Baseboard / Assoc. Trim	G	W	GR	C	0.1		A-1			
Floor	G	CPT	BLU		0.0					
Radiator/Rad Cover	G	M	Silver	A	0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	S	B	-0.1		B			
Casing	G	W	GR	↓	0.2		D			
Jamb	↓	↓	↓	↓	0.1		↓			
Stop	↓	↓	↓	BL	0.0		↓			
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	AZ	0.2		A-11			
Stop	G	W	GR	↓	0.3		↓			
Jamb	G	W	GR	↓	0.1		↓			
Window Well	F	W	W	↓	79.9		↓			LBP
Sill	G	W	GR	↓	0.4		↓			
Sash/Mullion	G	W	GR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION	SUBSTRATE				
G = GOOD (NO VISABLE DAMAGE)	P = PLASTER	SR = SHEETROCK	B = BRICK	WP = WALLPAPER	PP=PURPLE
F= FAIR (LESS THAN 10% DAMAGE)	W = WOOD	C = CONRETE		V = VARNISH C = CREAM	Y = YELLOW
P = POOR (GREATER THAN 10% DAMAGE	M = METAL	O = OTHER		S = STAIN T = TAN	R = RED
	CPT = CARPETED			BL = BLUE GY = GREY	P = PINK
				BLK = BLACK GR = GREEN	BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 15 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.0					
Crown Molding	F	W	P	D	0.2		A 1			
Wall	F	P	P	A	0.1					
Wall	↓	↓	↓	B	-0.3					
Wall				C	0.1					
Wall				D	1.2					
Baseboard / Assoc. Trim	G	W	P	A	0.1		A 1			
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	GR	C	0.0					
Casing	F	W	P		0.2					
Jamb	F	W	BR	↓	0.3					
Stop	F	W	GR		0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	F	W	P	A1	0.0	0.1	A 1			
Stop	F	W	P		0.2	0.0				
Jamb	F	W	P		0.1	-0.2				
Window Well	P	W	W		-0.3	0.0				
Sill	F	W	P		0.1	0.1				
Sash/Mullion	F	W	P	↓	0.3	0.0				
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F = FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP = WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP = PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 19 2012

ROOM #: 16 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.0					
Crown Molding	G	W	W	A	0.2		All			
Wall	G	RW	W	A	0.1					
Wall	↓	↓	↓	B	~0.3					
Wall	↓	↓	↓	C	0.1					
Wall	↓	↓	↓	D	0.0					
Baseboard / Assoc. Trim	G	W	GR		0.2					
Floor	G	W	S		0.1					
Radiator/Rad Cover	G	M	Silver	A	~0.3		B			
Shelves										
Rad Cover	G	W	GR	B	0.0					
DOOR TYPE 1										
Door	G	W	W	D1	0.0		D2			
Casing	G	W	GR	↓	0.2		↓			
Jamb	G	W	GR	↓	0.1		↓			
Stop	G	W	GR	↓	0.0		↓			
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR		0.2					
Stop	↓	↓	↓		0.1					
Jamb	↓	↓	↓		0.3					
Window Well	P	W	W		79.1					
Sill	G	W	GR		0.0					
Sash/Mullion	G	W	GR		0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Stair Riser	G	W	W	D	0.0					
Tread	G	W	W	D	0.2					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 17 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.1					
Crown Molding										
Wall	G	B	W	A	0.3					
Wall	↓	↓	↓	B	0.2					
Wall				C	0.1					
Wall				D	0.3					
Baseboard / Assoc. Trim										
Floor	G	W	S		0.1					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	S	D	0.0					
Casing	↓	↓	↓	↓	0.1					
Jamb					0.2					
Stop										
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR		0.0					
Stop	G	W	GR		0.2					
Jamb	G	W	GR		0.1					
Window Well	P	W	W		79.9					LBP
Sill	G	W	GR		0.0					
Sash/Mullion	G	W	GR		0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Closet wall	G	W	W		0.0					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 18 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall Upper	P	B	W	A	0.4					
Wall	G	↓	↓	B	0.5					
Wall	G	↓	↓	C	0.7					
Wall	G	↓	↓	D	0.3					
Baseboard / Assoc. Trim										
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	BLK	D	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb	↓	↓	↓	↓	0.1					
Stop	↓	↓	↓	↓	0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GRN	D	0.2					
Stop	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.0					
Window Well	F	W	W	↓	7.9					LBP
Sill	G	W	W	↓	0.0					
Sash/Mullion	G	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall Lower	P	B	W&GR	A	0.1					
	G	B	↓	B	0.3					
	↓	↓	↓	C	0.1					
	↓	↓	↓	D	0.0					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 1920 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall VARIES	G	B	W	A	0.0					
Wall	↓	↓	↓	B	0.2					
Wall				C	0.1					
Wall				D	-0.0					
Baseboard / Assoc. Trim										
Floor	P	C	—		0.0					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	S		0.2					
Casing	↓	↓	↓ W		0.1					
Jamb					0.0					
Stop	↓	↓	↓ W		0.0					
Threshold										
DOOR TYPE 2										
Door	G	M	W		0.2					
Casing	G	W	W	A	0.1					
Jamb	G	W	W		0.2					
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W							
Stop	↓	↓	↓							
Jamb										
Window Well	P	W	W							
Sill	G	W	W							
Sash/Mullion	G	W	W							
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME: 1430

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	0.0	2nd Reading:	0.0	3rd Reading:	0.1

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
D = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE	St. Johnsbury Armory
PROJECT ADDRESS	St. Johnsbury, Vermont
INSPECTOR	Harland Miller
DATE	December 17 2012
ROOM #: 21	Use:

LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.4					
Crown Molding										
Wall	G	B	BW	A	0.2					
Wall	↓	↓	↓	B	0.0					
Wall				C	3.0					LBP
Wall	↓	↓	↓	D	0.1					
Baseboard / Assoc. Trim										
Floor	P	C	BR		0.2					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	GR	C	~~0.0~~	3.7				LBP
Casing	G	W	S	↓	0.0					
Jamb										
Stop										
Threshold										
DOOR TYPE 2										
Door	G	W	S	B	0.1					
Casing	G	~~WW~~	BW	↓	0.3					
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	BW	D?	0.0					
Stop	↓	↓	↓		0.2					
Jamb	↓	↓	↓		0.1					
Window Well	P	W	W		79.9					LBP
Sill	G	W	BW		0.2					
Sash/Mullion	G	W	BW	↓	0.0					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall Upper	G	B	P	A	0.2					
	↓	↓	↓	B	0.1					
				C	3.4					LBP
	↓	↓	↓	D	0.0					
Wall Stairwell	G	B	GR		0.0					

CALIBRATIONS TIME: 12/17/12

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading: 1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading: 1.0
Zero Lead Reference:		1st Reading:	0.2	2nd Reading:	0.2	3rd Reading: -0.0

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 27 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		-0.3					
Crown Molding										
Wall	G	W	W	A	-0.0					
Wall	G	W	W	B	0.3					
Wall	G	W	W	C	0.2					
Wall	G	W	W	D	0.0					
Baseboard / Assoc. Trim										
Floor	F-P	C	GY		1.5					LBP
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	W	D	0.0					
Casing	G	M	GY	↓	0.2					
Jamb	↓	↓	↓	↓	0.1					
Stop	↓	↓	↓	↓	0.0					
Threshold										
DOOR TYPE 2										
Door	G	M	W	C	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb	↓	↓	↓	↓	-0.3					
Stop	↓	↓	↓	↓	0.3					
Threshold										
WINDOW TYPE 1										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall lower	G	B	GR	A	0.2					
↓	↓	↓	↓	B	0.1					
				C	0.2					
↓	↓	↓	↓	D	0.1					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 23 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	M	W		1.7					LBP
Crown Molding	G	M	GR	A	1.4					LBP
Wall	G	B	GR	A	1.5					LBP
Wall				B	1.4					LBP
Wall				C	1.5					LBP
Wall				D	1.6					LBP
Baseboard / Assoc. Trim										
Floor	P	C	GR		1.5					LBP
Radiator/Rad Cover	G	M	Silver		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	GR	D	0.0					
Casing					0.2					
Jamb					0.1					
Stop					0.3					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	AM	0.0					
Stop					0.2					
Jamb					0.1					
Window Well	P	W	W		>9.9					LBP
Sill	G	W	GR		0.2					
Sash/Mullion	G	W	GR		0.1					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 24 Use: LEVEL: B A

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall VPW	G	B	CR	A	2.8					LBP
Wall	↓	↓	↓	B	3.0					LBP
Wall				C	3.0					LBP
Wall										
Baseboard / Assoc. Trim										
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door										
Casing										
Jamb										
Stop										
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	B1	0.0					
Stop	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.2					
Window Well	P	W	W		>9.9					
Sill	G	W	GR		0.1					
Sash/Mullion	G	W	BR	↓	0.5					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall lower	B	B	W	A	3.0					LBP
	P	B	R	B	3.1					LBP
	P	B	R	C	2.9					LBP

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 2012

ROOM #: 25 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.1					
Crown Molding										
Wall	G	B	GR	A	0.2					
Wall	↓	↓	↓	B	0.0					
Wall				C	0.7					
Wall				D	0.8					
Baseboard / Assoc. Trim										
Floor	P	C	GY		1.3					LBP
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	W	A	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb					0.1					
Stop					0.0					
Threshold										
DOOR TYPE 2										
Door	G	W	GR	C	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb					0.1					
Stop					0.0					
Threshold										
~~WINDOW TYPE 1~~										
~~Casing/Apron~~ Wall	G	BR	W	A	3.0					LBP
~~Stop~~	↓	↓	↓	B	3.1					LBP
~~Jamb~~				C	3.0					LBP
~~Window Well~~				D	3.2					LBP
~~Sill~~										
~~Sash/Mullion~~										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Stair riser	G	W	W	A	1.1					LBP
tread	P	W	—	↓	0.0					
Stringer	G	W	GR		0.2					
railing	G	W	GR	↓	0.1					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 2012

ROOM #: 26 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall	G	B	W	A	0.5					
Wall	G	B	W	D	0.0					
Wall	G	~~B~~	~~W~~							
Wall	G	C	W	D	0.3					
Baseboard / Assoc. Trim										
Floor	P	C	BR		0.3					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	GY	C	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb					0.1					
Stop	↓	↓	↓	↓	0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W	B2	0.0					
Stop	G	W	W		0.2					
Jamb	G	W	W	↓	0.1					
Window Well	F	W	W		>9.5					LBP
Sill	G	W	W	↓	0.0					
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 27 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	S		0.0					
Crown Molding										
Wall	G	C	W	A	0.0					
Wall	G	C	W	B	0.2					
Wall										
Wall	G	B	H GR	D	0.4					
Baseboard / Assoc. Trim										
Floor	G	C	GY		0.0					
Radiator/Rad Cover										
Shelves										
Post	G	M	GY		0.0					
DOOR TYPE 1										
Door	G	M	GY	C	0.0					
Casing	↓	↓	↓	↓	0.0					
Jamb					0.0					
Stop					0.2					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION	SUBSTRATE		WP=WALLPAPER		PP=PURPLE
G = GOOD (NO VISABLE DAMAGE)	P = PLASTER	B = BRICK	V = VARNISH	C = CREAM	Y = YELLOW
F= FAIR (LESS THAN 10% DAMAGE)	SR = SHEETROCK	C = CONRETE	S = STAIN	T = TAN	R = RED
P = POOR (GREATER THAN 10% DAMAGE	W = WOOD	O = OTHER	BL = BLUE	GY = GREY	P = PINK
	M = METAL		BLK = BLACK	GR = GREEN	BR = BROWN
	CPT = CARPETED				

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 28 + 29 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall	G	C	W	A	0.0					
Wall	G P	B	W	B	0.2					
Wall	F	B	W	C	0.3					
Wall	WP	B	GR	D	0.1					
Baseboard / Assoc. Trim										
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	WM	GY	B	0.0					
Casing	G	W	GY	↓	0.2					
Jamb	G	W	W		0.1					
Stop	G	W	W	↓	0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W	BR	0.0					
Stop	G	W	W	↓	0.2					
Jamb	G	W	W		0.1					
Window Well	F	W	W		79.9					LBP
Sill	G	W	W		0.0					
Sash/Mullion	G	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall upper	G	B	GR	C	0.0					
Wall lower	G	B	GR	C	0.2					
W	G	W	S	A	0.1					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory
PROJECT ADDRESS: St. Johnsbury, Vermont
INSPECTOR: Harland Miller
DATE: December 17 2012
ROOM #: 30-37 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	M	W		0.0					
Crown Molding										
Wall upper	G	B	GR	A	0.1					
Wall	↓	↓	↓	B	0.2					
Wall	↓	↓	↓	C	0.0					
Wall	P	↓	↓	D	0.0					
Baseboard / Assoc. Trim										
Floor	P	C	GY		0.2					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door										
Casing										
Jamb										
Stop										
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	T	D6	0.0					
Stop				↓						
Jamb				↓						
Window Well	G	W	T	↓	3.0					LBP
Sill	G	W	T	↓	0.1					
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall lower	G	B	GR	A	0.2					
	↓	↓	↓	B	0.5					
	↓	↓	↓	C	0.1					
	P	↓	↓	D	0.0					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: Exterior LEVEL:

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Siding	G	B	—	A	0.0					
Siding	↓	↓	↓	B	0.2					
Siding				C	0.1					
Siding				D	0.0					
Cornerboards										
Facia rear	P	W	W		Assume					
Soffit rear	P	W	W		Assume					
Foundation										
Skirtboard										
Stair risers,tread,stringer										
DOOR TYPE 1										
Door	G	W	GR	D	0.0					
Casing	G	W	GR	D	0.2					
Jamb										
Stop										
Header										
DOOR TYPE 2										
Door	G	W	GR	1	0.0					
Casing	G	W	W	1	0.2					
Jamb										
Stop										
Header										
WINDOW TYPE 1										
Casing/Apron	F	W	W		>9.9		All			LBP
Stop	↓	↓	↓		>9.9		↓			LBP
Jamb	↓	↓	↓		>9.9					LBP
Window Well	F-P	W	W		>9.9					LBP
Sill										
Sash/Mullion	F	W	GR		3.0					LBP
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
S.h. Rock	G	W	W	D	3.0					LBP

CALIBRATIONS TIME: 12/17 1300

Manufacture's Block:	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
NIST Block: (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	-0.2	2nd Reading:	-0.1	3rd Reading:	0.0

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F = FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAG

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP = WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP = PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

XRF Protocol

XRF Protocol

LBP testing was performed at the above referenced site. The testing was performed in general conformance to the United States Department of Housing and Urban Development's (HUD) 1997 Revised Chapter 7 of the Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (HUD guidelines), dated June, 1995. HUD guidelines define the term lead based paint as paint or other surface coatings that contain lead equal to or greater than 1.0 mg/cm^2 (by XRF) or 0.5 % by weight (laboratory paint chip analysis).

ATC conducted a LBP survey of accessible interior and exterior surfaces of the main residence. Please refer to to the attached Sample Location Diagrams for a diagram of the building complete with room numbers. For a description of the XRF instrument and procedure, see **Appendix B**: "XRF Protocol". **Appendix C** contains appropriate Lead Certifications.

Areas selected for testing were designated as "room equivalents." Pursuant to the HUD Guidelines, a room equivalent is an identifiable part of a residence, such as a room, a house exterior side or an exterior area. Within each room equivalent, "testing combinations" were identified and tested. A testing combination is characterized by a unique combination of room equivalent, building component types, and substrate (for example: all like painted doors with wood substrate within the same room). Pursuant to the 1997 Revision of Chapter 7 HUD Guidelines, one reading was completed for each testing combination except for walls, where one reading was taken for each wall in the room. Testing combinations were tested by using a LPA-1, serial # 1355, X-Ray Fluorescence Analyzer (XRF).

XRF field screening results are noted on the field sheets included within this report under **Appendix A.** Column one of the field sheets contains the type of component tested, the second column contains the condition of the painted surface, either "G" (good), "F" (fair) or "P" (poor). The third column contains the type of substrate of the component (such as wood, sheet rock, etc.). The fourth column contains the color of the painted surface at the time of the testing. Column five contains the side of the room for which the component was tested, indicated as side A, B, C, or D. As depicted on the Diagram(s) included with this report, side A is the side of the room facing the street, and moving in a clockwise direction each additional side perpendicular to the previous side (i.e. angled walls are not assigned a letter) is given the next consecutive letter. Column six contains the XRF result for that reading, column seven contains the XRF result for that reading if the testing was repeated. Column eight includes other *like components* within the room. *Like components* are similar components in the same room equivalent that should be considered to have identical paint content. If a paint chip sample is collected (due to an inconclusive XRF result or odd shaped component) then column nine contains the paint chip sample number and column ten indicates the corresponding laboratory result.

The abbreviation "LBP" will be entered in column eleven for any component and like components that are identified as lead-based paint.

The bottom of each field sheet also contains an area for remarks provided by the inspector which detail specific conditions noted for that particular area tested.

The LPA-1 Lead Paint Analyzer is a complete lead paint analysis system which quickly, accurately, and non-destructively measures the concentration of LBP on surfaces. The LPA-1 relies on the measurement of the K-shell X-rays to determine the amount of lead present in the painted surface. K-shell X-rays can penetrate many layers of paint and allow a good measurement of the lead content of paint to be made without being significantly affected by the thickness or number of layers of paint on the surface of the sample.

The LPA-1 has the ability to analyze and compute corrections for the differences in the energy spectrums relating to different substrates. This analysis of the energy spectrum means that the lead paint reading

displayed on the instrument already accounts for any substrate effects and no correction is required by the operator. The LPA-1's field of view is limited to a depth of 3/8", deep enough to handle virtually all painted surfaces, but not prone to detect lead objects located behind the surface.

There are two measurement modes of operation in the LPA-1 analyzer namely the "Standard Mode" and the "Quick Mode". In the "Standard" mode, the operator selects a fixed measurement time which remains constant irrespective of the lead signal. In the "Quick" mode, the analyzer automatically adjusts the measurement time to be the least time that is needed to make a definitive measurement with a 95% confidence level (2 sigma). The LPA-1 analyzer will finish a measurement once the 2 sigma confidence level is achieved and the data is statistically meaningful. This time period for conclusive measurements is typically between 1 to 5 seconds, but can extend to a measurement of 60 seconds depending on the action level for abatement. ATC utilized the LPA-1 in the "Quick" mode for the testing performed at this unit. The highest level of LBP reported by the LPA-1 using the "Quick" mode is a result of > 9.9 mg/cm2 (greater than 9.9 mg/cm2). This result indicates LBP significantly over the HUD definition of 1.0 mg/cm2.

A "validation test" was performed to ensure that the instrument was operating properly. The validation test was performed on a calibration test block supplied by the manufacturer, as well as the National Institute for Standards and Testing (NIST) 1.02 mg/cm2 test film to determine if the instrument measured the lead content consistently on a day to day basis. A series of three standard measurements consisting of 60 seconds per measurement were taken on the test blocks. The individual readings were recorded and compared to the factory test data provided with the instrument. Please find validation test results on the enclosed field sheets.

Performance Characteristic Sheet

Performance Characteristic Sheet

EFFECTIVE DATE: **October 25, 2006** **EDITION NO.: 5**

MANUFACTURER AND MODEL:

Make: ***Radiation Monitoring Devices***
Model: ***LPA-1***
Source: ^{57}Co
Note: This sheet supersedes all previous sheets for the XRF instrument of the make, model, and source shown above ***for instruments sold or serviced after June 26, 1995. For other instruments, see prior editions.***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Quick mode or 30-second equivalent standard (Time Corrected) mode readings.

XRF CALIBRATION CHECK LIMITS:

0.7 to 1.3 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

For XRF results below 4.0 mg/cm^2, substrate correction is recommended for:

Metal using 30-second equivalent standard (Time Corrected) mode readings.
None using quick mode readings.

Substrate correction is not needed for:

Brick, Concrete, Drywall, Plaster, and Wood using 30-second equivalent standard (Time Corrected) mode readings
Brick, Concrete, Drywall, Metal, Plaster, and Wood using quick mode readings

THRESHOLDS:

30-SECOND EQUIVALENT STANDARD MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results corrected for substrate bias on metal substrate only	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	0.9
	Plaster	1.0
	Wood	1.0

QUICK MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Readings not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations in July 1995. The instrument that performed testing in September had a new source installed in June 1995 with 12 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.02 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

> Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.
>
> Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.
>
> For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):
>
> $$\text{Correction value} = (1^{st} + 2^{nd} + 3^{rd} + 4^{th} + 5^{th} + 6^{th}\ \textit{Reading}) / 6 - 1.02\ \text{mg/cm}^2$$
>
> Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use either the Quick Mode or 30-second equivalent standard (Time Corrected) Mode readings.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

BIAS AND PRECISION:

Do not use these bias and precision data to correct for substrate bias. These bias and precision data were computed without substrate correction from samples with reported laboratory results less than 4.0 mg/cm^2 lead. The data which were used to determine the bias and precision estimates given in the table below have the following properties. During the July 1995 testing, there were 15 test locations with a laboratory-reported result equal to or greater than 4.0 mg/cm^2 lead. Of these, one 30-second standard mode reading was less than 1.0 mg/cm^2 and none of the quick mode readings were less than 1.0 mg/cm^2. The instrument that tested in July is representative of instruments sold or serviced after June 26, 1995. These data are for illustrative purposes only. Actual bias must be determined on the site. Results provided above already account for bias and precision. Bias and precision ranges are provided to show the variability found between machines of the same model.

30-SECOND STANDARD MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm^2)	PRECISION* (mg/cm^2)
0.0 mg/cm^2	Brick	0.0	0.1
	Concrete	0.0	0.1
	Drywall	0.1	0.1
	Metal	0.3	0.1
	Plaster	0.1	0.1
	Wood	0.0	0.1
0.5 mg/cm^2	Brick	0.0	0.2
	Concrete	0.0	0.2
	Drywall	0.0	0.2
	Metal	0.2	0.2
	Plaster	0.0	0.2
	Wood	0.0	0.2
1.0 mg/cm^2	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.0	0.3
	Metal	0.2	0.3
	Plaster	0.0	0.3
	Wood	0.0	0.3
2.0 mg/cm^2	Brick	-0.1	0.4
	Concrete	-0.1	0.4
	Drywall	-0.1	0.4
	Metal	0.1	0.4
	Plaster	-0.1	0.4
	Wood	-0.1	0.4

*Precision at 1 standard deviation.

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions of this *XRF Performance Characteristics Sheet* did not include both bounds of the inconclusive range as "inconclusive." While this edition of the Performance Characteristics Sheet uses a different system, the specific XRF readings that are considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, so previous inspection results are not affected.

DOCUMENTATION:

An EPA document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD. A HUD document titled *A Nonparametric Method for Estimating the 5th and 95th Percentile Curves of Variable-Time XRF Readings Based on Monotone Regression* provides supplemental information on the methodology for variable-time XRF instruments. A copy of this document can be obtained from the HUD lead web site, www.hud.gov/offices/lead.

This XRF Performance Characteristic Sheet was developed by QuanTech, Inc., under a contract from the U.S. Department of Housing and Urban Development (HUD). HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.*

XRF QA/QC Results

St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont

Repeated Testing for Quality Assurance

December 2012

63.35078.0013

Testing Combination	Initial Result mg/cm2	Retest Result mg/cm2	Average	Square the Average
Door Type 1 Door	-0.3	0.0	-0.15	0.0225
Door Type 1 Casing	0.1	0.1	0.1	0.01
Door Type 1 Jamb	0.0	0.2	0.1	0.01
Door Type 1 Stop	0.2	0.1	0.15	0.0225
Window Casing	0.0	0.1	0.05	0.0025
Window Stop	0.2	0.0	0.1	0.01
Window Jamb	0.1	-0.2	-0.05	0.0025
Window Well	0.3	0.0	0.15	0.0225
Window Sill	0.1	0.1	0.1	0.01
Window Sash	0.3	0.0	0.15	0.0225

add squared averages	0.135	(C)
C x 0.0072	0.000972	(D)
D + 0.032	0.032972	(E)
square root of E	0.181581937	(F)
F x 1.645	0.2987	Retest Tolerance Limit
average of Initial	0.10	
average of retest	0.04	
Absolute Difference	0.06	

Absolute Difference < Retest Tolerance? **Pass**

Appendix D

Lead in Dust Sample Location Diagram
Lead in Dust Laboratory Report

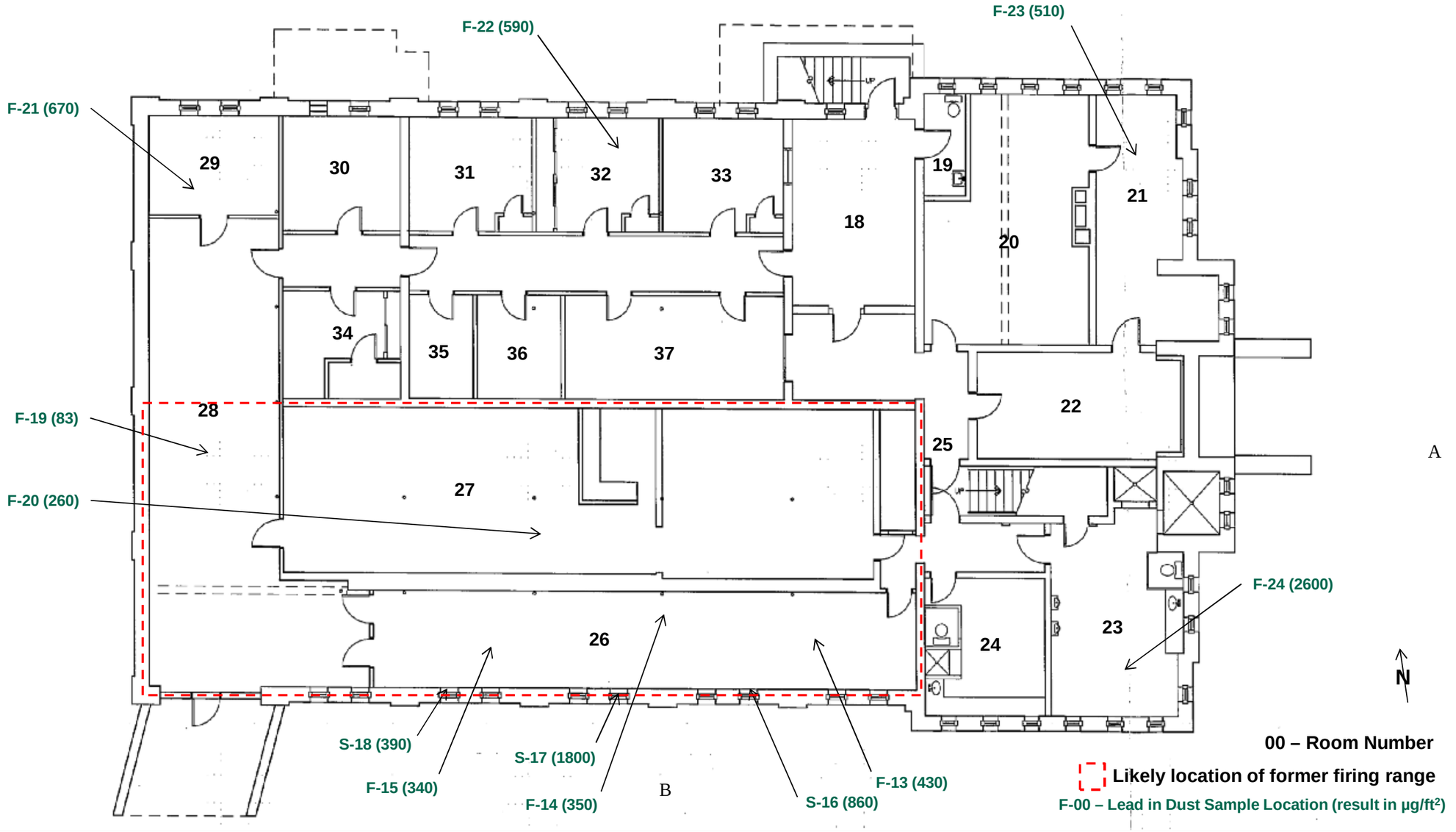
Lead in Dust Sample Location Diagram

D

C

A

B



SAMPLE LOCATION DIAGRAM - Lead

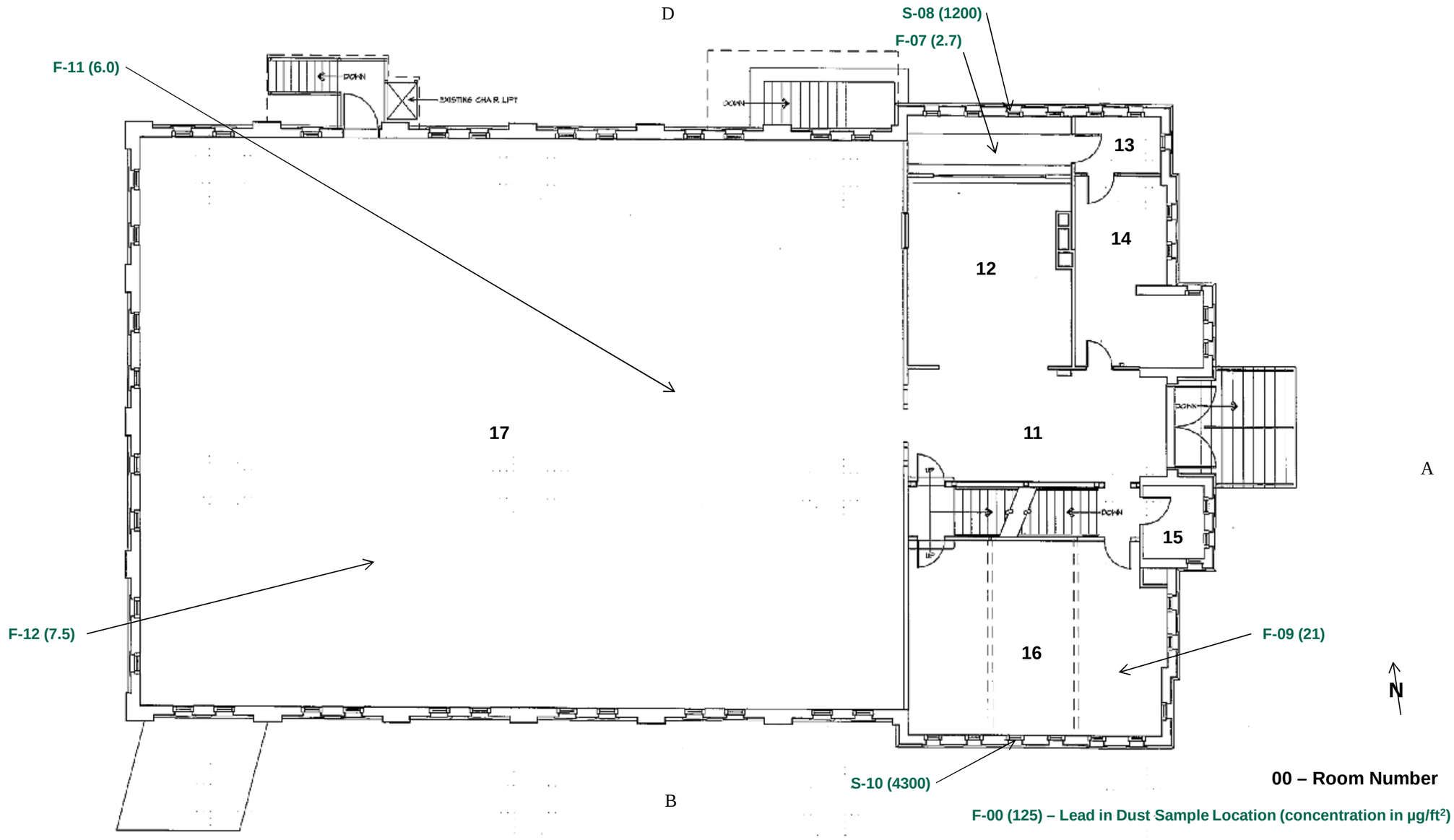
Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM - Lead

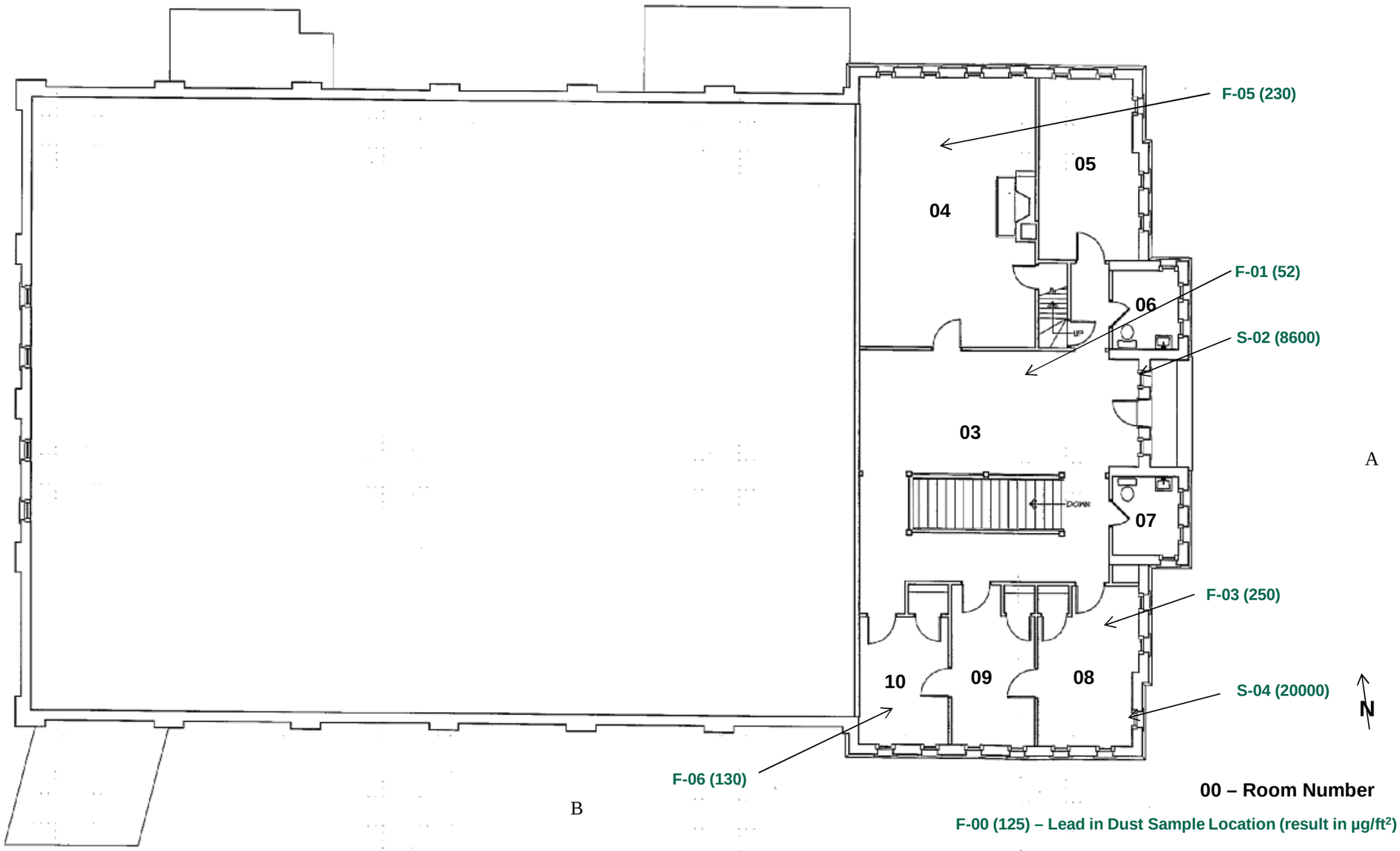
Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM - Lead

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

Lead in Dust Laboratory Report

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495
Phone: (802) 862-1980
Fax: (802) 862-1405

12/31/2012

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/21/2012. The results are tabulated on the attached data pages for the following client designated project:

63.35078.0013

The reference number for these samples is EMSL Order #011205745. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director

The test results contained within this report meet the requirements of NELAC and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10896, PA 68-00367

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order:	011205745
CustomerID:	ATCE53
CustomerPO:	
ProjectID:	

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Received:	12/21/12 2:30 PM
Collected:	12/17/2012

Analytical Results

Client Sample Description F-01 Rm 03 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0001*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	52	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description S-02 Rm 03 Sill — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0002*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	8600	140	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-03 Rm 08 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0003*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	250	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-04 Rm 08 Sill — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0004*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	20000	270	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-05 Rm 04 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0005*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	230	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-06 Rm 10 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	130	2.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-07 Rm 12 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0007*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	2.7	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205745
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/21/12 2:30 PM
Collected: 12/17/2012

Project: **63.35078.0013**

Analytical Results

Client Sample Description S-08 Rm 12 Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0008*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	1200	27	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-09 Rm 16 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0009*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	21	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description S-10 Rm 16 Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0010*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	4300	69	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-11 Rm 17 North Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0011*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	6.0	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description F-12 Rm 17 South Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0012*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	7.5	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description F-13 Rm 26 East Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0013*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	430	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-14 Rm 26 Center Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0014*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	350	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205745
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/21/12 2:30 PM
Collected: 12/17/2012

Project: **63.35078.0013**

Analytical Results

Client Sample Description F-15 Rm 26 West Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0015*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	340	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-16 Rm 26 East Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0016*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	860	11	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-17 Rm 26 Center Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0017*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	1800	27	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-18 Rm 26 West Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0018*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	390	11	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-19 Rm 28 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0019*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	83	1.0	µg/ft²			12/27/2012	BE

Client Sample Description F-20 Rm 27 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0020*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	260	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-21 Rm 29 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0021*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	670	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205745
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/21/12 2:30 PM
Collected: 12/17/2012

Analytical Results

Client Sample Description F-22 Rm 32 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0022*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	590	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-23 Rm 21 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0023*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	510	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-24 Rm 23 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0024*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	2600	50	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-25 Rm 40 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0025*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	ND	1.0	µg/ft²			12/27/2012	BE

Client Sample Description F-26 Rm 41 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0026*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	180	4.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Definitions:
ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only):* 012205745

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (856) 303-2533
FAX: (856) 786-5974

Company: Cardno ATC	**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 171 Commerce St	
City: Williston **State/Province:** VT	**Zip/Postal Code:** **Country:**
Report To (Name): Harland Miller	**Telephone #:**
Email Address: Harland.Miller@Cardno.com	**Fax #:** **Purchase Order:**
Project Name/Number: 63.35078.0013	**Please Provide Results:** ☐ Fax ☒ Email
U.S. State Samples Taken: Vermont	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☒ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ % by wt. ☐ mg/cm² ☐ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☐
~~Air~~ EMSL SOP 001 Revision 7 2/13/12	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☒
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: H. Miller **Signature of Sampler:**

Sample #	Location	Volume/Area	Date/Time Sampled
	SEE ATTACHED		

RECEIVED
DEC 20 2012
EMSL ANALYTICAL, INC.
CINNAMINSON, NJ

Client Sample #'s P01 - P26 **Total # of Samples:** 26

Relinquished (Client):		**Date:**	12/19/12	**Time:**	
Received (Lab):	Travis Albert	**Date:**	12/21/12	**Time:**	2:30pm

Comments:

- must called due to method being used (EMSL SOP 001 Revision 7 or Pb-FLAA?)
- Called. Eric picked up. gave me Harland Miller's number 1:54pm 12/21/12
- Called Harland Miller's number. He answered but said he will call back to give type of method. He was not sure of method. 1:57pm 12/21/12
- Harland Miller called back. He decided to get ICP-AES method, not Pb-FLAA (lead contact+dust) 2:03pm 12/21/12

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only):*

01120574S

63.35678.0013

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 303-2533
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location		Volume/Area inches	Date/Time Sampled
F-01	Room 03	Floor	12"x12"	12/17/12
S-02	03	Sill	3½x15	
F-03	08	Floor	12x12	
S-04	08	Sill	3½ x15	
F-05	04	Floor	12x12	
F-06	10	Floor	12x12	
F-07	12	Floor	12 x12	
S-08	12	Sill	3½ x15	
F-09	16	Floor	12x12	
S-10	16	Sill	3½ x15	
F-11	17 North	Floor	12x12	
F-12	17 South	Floor	12 x12	
F-13	26 East	Floor	12x12	
F-14	↓ Center	↓	↓	
F-15	↓ West	↓	↓	
S-16	26 East	Sill	~~3½ x~~ 6x22	
S-17	↓ Center	↓	↓	
S-18	↓ West	↓	↓	

Comments/Special Instructions:

RECEIVED
EMSL
CINNAMINSON, NJ
2012 DEC 20 AM 8:58

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only)*:

01205745

63.35078.0013

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 303-2533
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location	Volume/Area Inches	Date/Time Sampled
F-19	Room 28 Floor	12 x 12	12/17/12
F-20	27		
F-21	29		
F-22	32		
F-23	21		
F-24	23		
F-25	40		
F-26	41		

Comments/Special Instructions:

RECEIVED
EMSL
CINNAMINSON, NJ
DEC 27 2012
AM 08:58

Page 3 of 3 pages

Appendix E

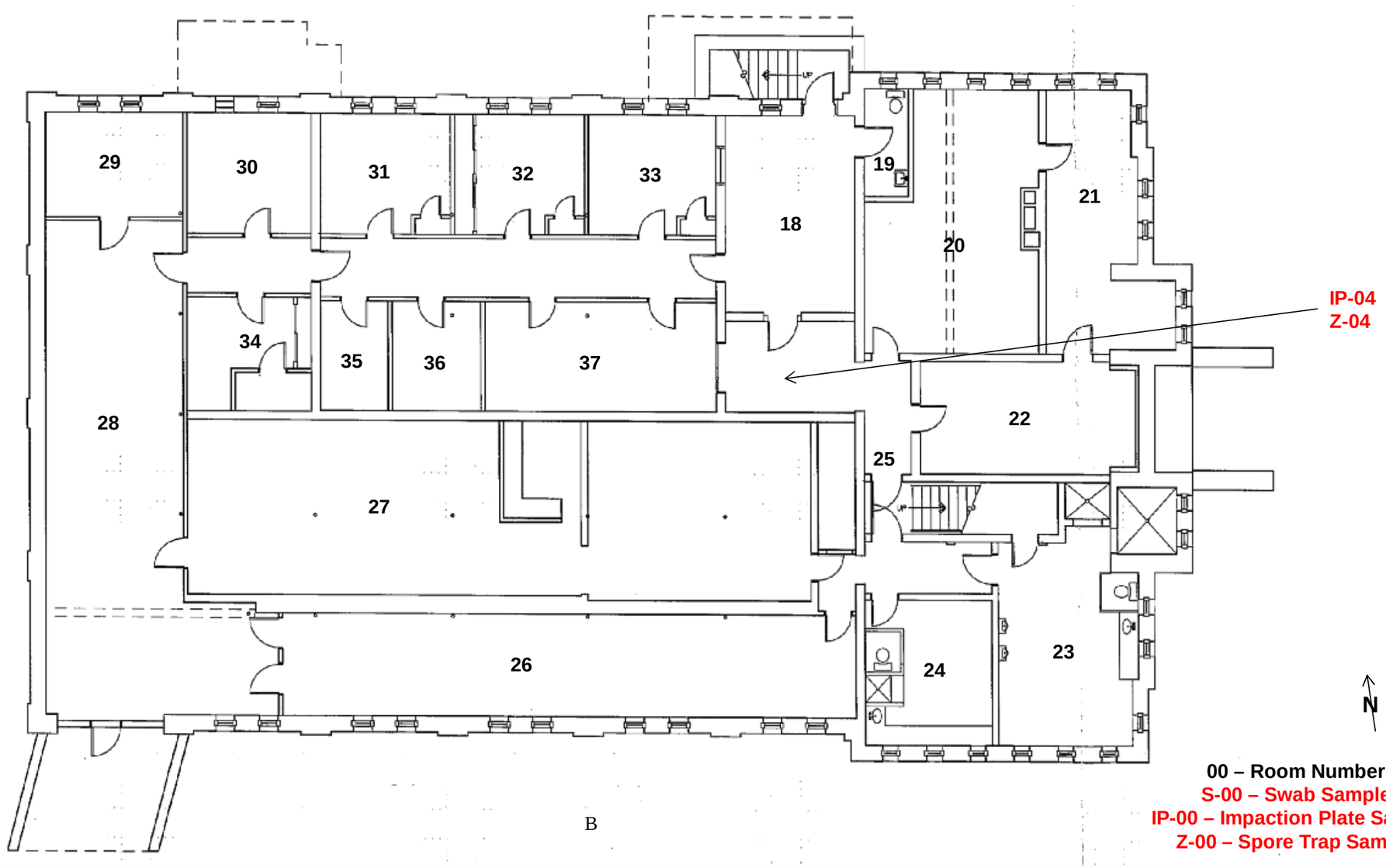
Indoor Air Quality Sample Location Diagram
Indoor Air Quality Laboratory Report

Indoor Air Quality Sample Location Diagram

D

C

A



B

00 – Room Number
S-00 – Swab Sample
IP-00 – Impaction Plate Sample
Z-00 – Spore Trap Sample

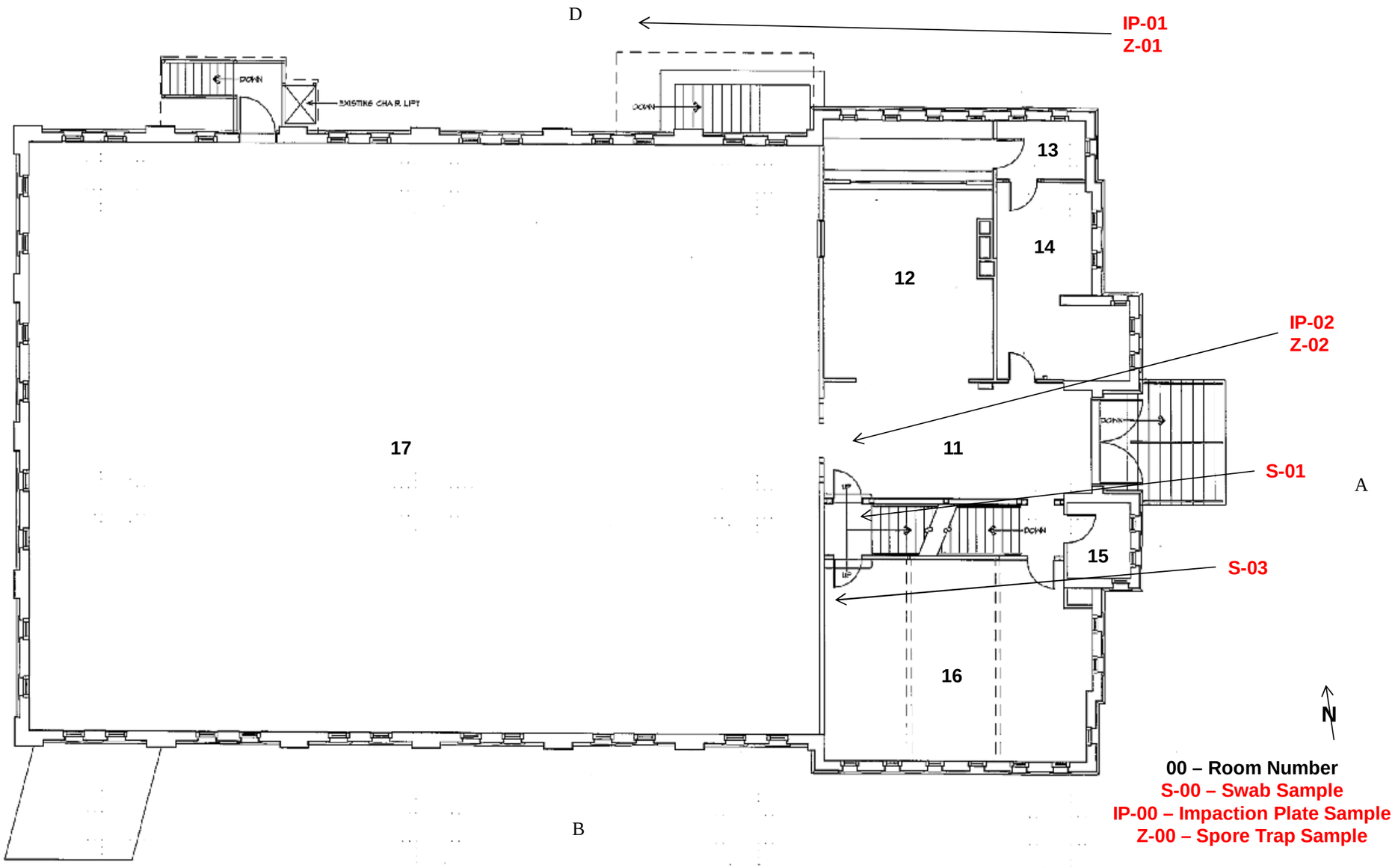
SAMPLE LOCATION DIAGRAM - IAQ

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



00 – Room Number
S-00 – Swab Sample
IP-00 – Impaction Plate Sample
Z-00 – Spore Trap Sample

SAMPLE LOCATION DIAGRAM – IAQ

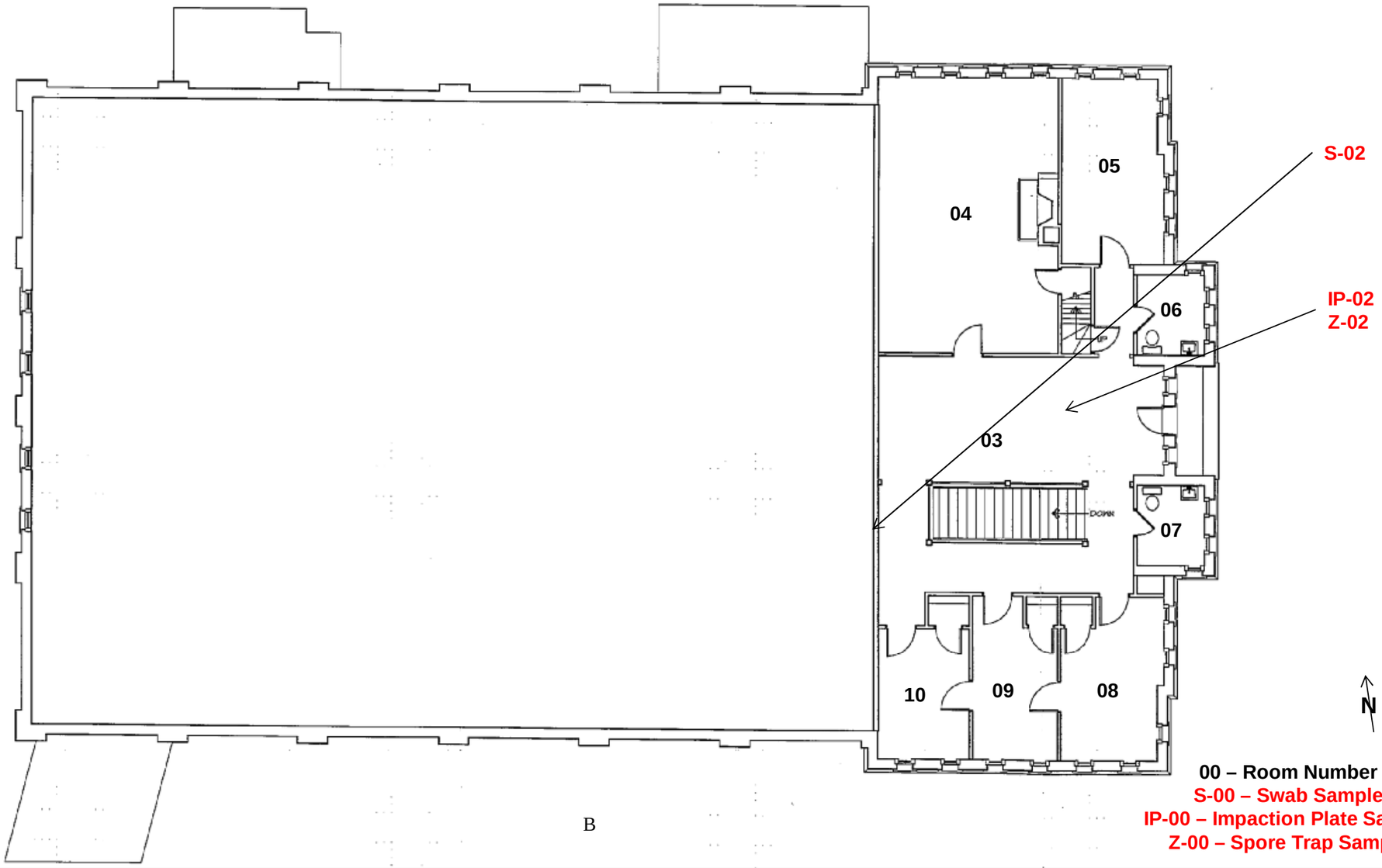
Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



00 – Room Number
S-00 – Swab Sample
IP-00 – Impaction Plate Sample
Z-00 – Spore Trap Sample

SAMPLE LOCATION DIAGRAM

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

Indoor Air Quality Laboratory Report

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com / cinnmicrolab@emsl.com

Order ID:	371220373
Customer ID:	ATCE53
Customer PO:	
Project ID:	

Attn: Harland Miller
Cardno ATC
PO Box 1486
Williston, VT 05495

Proj: 63.35078.0013

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Collected:	12/18/2012
Received:	12/20/2012
Analyzed:	01/02/2013

Test Report: Air-O-Cell Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	371220373-0006			371220373-0007			371220373-0008		
Client Sample ID:	Z-01			Z-02			Z-03		
Volume (L):	150			150			150		
Sample Location:	Ext north door			Room 03			Room 11		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria	1*	7*	2.9	-	-	-	1*	7*	3.7
Ascospores	7	100	20.6	-	-	-	1*	7*	3.7
Aspergillus/Penicillium	21	430	61.8	20	410	66.7	11	230	40.7
Basidiospores	3	60	8.8	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1*	7*	2.9	6	100	20	1	20	3.7
Curvularia	-	-	-	-	-	-	1*	7*	3.7
Epicoccum	1*	7*	2.9	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	20	3.3	5	100	18.5
Myxomycetes++	-	-	-	2	40	6.7	3*	20*	11.1
Pithomyces	-	-	-	-	-	-	1	20	3.7
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	1*	7*	3.7
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1*	7*	3.3	2	40	7.4
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**34**	**611**	**100**	**30**	**577**	**100**	**27**	**458**	**100**
Hyphal Fragment	1*	7*	-	1	20	-	1	20	-
Insect Fragment	-	-	-	-	-	-	1*	7*	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	3	-

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC–EMLAP Lab 100194

Initial report from: 01/02/2013 10:58:31

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com / cinnmicrolab@emsl.com

Order ID:	371220373
Customer ID:	ATCE53
Customer PO:	
Project ID:	

Attn: Harland Miller
Cardno ATC
PO Box 1486
Williston, VT 05495

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Collected:	12/18/2012
Received:	12/20/2012
Analyzed:	01/02/2013

Proj: 63.35078.0013

Test Report: Air-O-Cell Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	371220373-0009			371220373-0010			
Client Sample ID:	Z-04			Z-05			
Volume (L):	150			150			
Sample Location:	Room 25			Room 40			
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	
Alternaria	-	-	-	-	-	-	
Ascospores	1	20	0.6	-	-	-	
Aspergillus/Penicillium	139	2850	87.4	-	-	-	
Basidiospores	-	-	-	-	-	-	
Bipolaris++	-	-	-	-	-	-	
Chaetomium	-	-	-	-	-	-	
Cladosporium	13	270	8.2	-	-	-	
Curvularia	-	-	-	-	-	-	
Epicoccum	1*	7*	0.6	-	-	-	
Fusarium	-	-	-	-	-	-	
Ganoderma	-	-	-	-	-	-	
Myxomycetes++	2*	10*	1.3	-	-	-	
Pithomyces	-	-	-	-	-	-	
Rust	-	-	-	-	-	-	
Scopulariopsis	1	20	0.6	-	-	-	
Stachybotrys	2*	10*	1.3	-	-	-	
Torula	-	-	-	-	-	-	
Ulocladium	-	-	-	-	-	-	
Unidentifiable Spores	-	-	-	-	-	-	
Zygomycetes	-	-	-	-	-	-	
Total Fungi	**159**	**3187**	**100**	-	**No Trace**	-	
Hyphal Fragment	1	20	-	-	-	-	
Insect Fragment	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	21	-	-	21	-	
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	
Skin Fragments (1-4)	-	2	-	-	-	-	
Fibrous Particulate (1-4)	-	1	-	-	-	-	
Background (1-5)	-	2	-	-	-	-	

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 01/02/2013 10:58:31

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com cinnmicrolab@emsl.com

EMSL Order:	371220373
CustomerID:	ATCE53
CustomerPO:	
ProjectID:	

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Received:	12/20/12 11:00 AM
Analysis Date:	12/27/2012
Collected:	12/18/2012

Test Report: Viable Fungi Identification and Enumeration (Genus Level ID from Plate and Strip Impactors (EMSL Method M005))

Sample Description	Location	Volume (L)	Media	Incubation Temp (C)	Sensitivity (CFU/m³)	Fungal Identification	Colony Count	CFU/m³
IP-01	Ext north door	136.45	MEA	25	7	*Aspergillus sp.*	1	7
371220373-0001						*Penicillium sp.*	5	35
						Sterile(dark)	1	7
						Sterile(white)	4	28
						Yeast	3	21
						Total	**14**	**98**
IP-02	Room 03	136.45	MEA	25	7	*Aspergillus sp.*	24	168
371220373-0002						*Cladosporium sp.*	2	14
						Penicillium sp.	2	14
						Sterile(white)	2	14
						Total	**30**	**210**
IP-03	Room 11	136.45	MEA	25	7	*Aspergillus sp.*	63	441
371220373-0003						*Cladosporium sp.*	1	7
						Penicillium sp.	7	49
						Sterile(white)	2	14
						Total	**73**	**511**
IP-04	Room 25	136.45	MEA	25	7	*Aspergillus sp.*	31	217
371220373-0004						*Penicillium sp.*	3	21
						Scopulariopsis sp.	2	14
						Total	**36**	**252**
IP-05	Room 40	136.45	MEA	25	7	**None Detected**		
371220373-0005								

No discernable blank was submitted with this group of samples.

Analyst(s)

Zeljko Jurjevic (5)

Farbod Nekouei, M.S., Laboratory Manager
or other approved signatory

Positive hole correction factors have not been applied to the reported data. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. Interpretation of the data contained in this report is the responsibility of the client. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. The detection limit is equal to 1 colony forming unit (CFU) per agar plate.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from 12/27/2012 19:16:52

THIS IS THE LAST PAGE OF THE REPORT.

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number *(Lab Use Only)*: 371220373

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX:(856) 786-0262

Company : Cardno ATC		**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: 11 Commerce St.			
City: Williston	**State/Province:** VT	**Zip/Postal Code:**	**Country:**
Report To (Name): Harland Miller		**Telephone #:**	
Email Address: Harland.Miller@Cardno.com		**Fax #:**	**Purchase Order:**
Project Name/Number: 63.35678.0013		**Please Provide Results:** ☐ Fax ☒ Email ☐ Fax	
U.S. State Samples Taken: Vermont		**Connecticut Samples:** ☐ Commercial ☐ Residential	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☐ 72 Hour	☐ 96 Hour	☐ 1 Week	☒ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements*

Non Culturable Air Samples (Spore Traps) – Test Codes

• **M001** Air-O-Cell	• **M173** Allegro M2	• **M004** Allergenco	• **M032** Allergenco-D	• **M172** Versa Trap
• **M049** BioSIS	• **M003** Burkard	• **M043** Cyclex	• **M002** Cyclex-d	
• **M030** Micro 5	• **M174** MoldSnap	• **M176** Relle Smart	• **M130** Via-Cell	

Other Microbiology Test Codes

• **M041** Fungal Direct Examination	• **M014** Endotoxin Analysis	• **M029** *Enterococci*
• **M005** Viable Fungi ID and Count	• **M015** Heterotrophic Plate Count	• **M019** Fecal Coliform
• **M006** Viable Fungi ID and Count (Speciation)	• **M180** Real Time Q-PCR-ERMI 36	• **M133** MRSA Analysis
• **M007** Culturable Fungi	• Panel	• **M028** *Cryptococcus neoformans*
• **M008** Culturable Fungi (Speciation)	• **M018** Total Coliform	Detection
• **M009** Gram Stain Culturable Bacteria	(Membrane Filtration)	• **M120** *Histoplasma capsulatum*
• **M010** Bacterial Count and ID – 3 Most	• **M020** Fecal *Streptococcus*	Detection
Prominent	(Membrane Filtration)	• **M033-39** Allergen Testing
• **M011** Bacterial Count and ID – 5 Most	• **M210-215** *Legionella* Detection	• **M044** Group Allergen
Prominent	• **M026** Recreational Water Screen	(Cat, Dog, Cockroach, Dustmites)
• **M013** Sewage Contamination in Buildings	• **M027** Mycotoxin Analysis	• **Other** See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: **Signature of Sampler:**

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
	SEE ATTACHED				

2012 DEC 20 AM 11:53

Client Sample # (s): IP01 - IP-05 201 - 205 **Total # of Samples:** 10

Relinquished (Client): **Date:** 12/19/12 **Time:** 1800

Received (Client): FX **Date:** 12/20/12 **Time:** 1108

Comments:

Received 12/20/12

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*):

3712 20373

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX:(856) 786-0262

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
IP-01	Ext. North Door	AIR	M005	136.45 L	12/18/12
IP-02	Room 03	↓	↓	↓	↓
IP-03	Room 11				
IP-04	Room 25				
IP-05	Room 40		↓	↓	
2-01	Ext. North Door		M001	150L	
2-02	Room 03		↓	↓	
2-03	Room 11				
2-04	Room 25				
2-05	Room 40	↓	↓	↓	↓

2012 DEC 20 AM 11:53

Comments/Special Instructions:

received 12/20/12

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com / cinnmicrolab@emsl.com

Order ID:	371220822
Customer ID:	ATCE53
Customer PO:	
Project ID:	

Attn: Jesse Stratton
Cardno ATC
PO Box 1486
Williston, VT 05495

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Collected:	12/28/2012
Received:	12/31/2012
Analyzed:	01/02/2013

Proj: 63.35078.0013

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Swab Samples (EMSL Method: M041)

Lab Sample Number:	371220822-0001	371220822-0002	371220822-0003	371220822-0004	
Client Sample ID:	S-01	S-03 3rd Fl	S-03	S-04	
Sample Location:	31B @ Bottom of Stairs	Rm 3 West Wall Under Paint	Rm 16 NW Corner on Joists	Blank	
Spore Types	Category	Category	Category	Category	
Agrocybe/Coprinus	-	-	-	-	
Alternaria	-	-	-	-	
Ascospores	-	-	-	-	
Aspergillus/Penicillium	-	Rare	-	-	
Basidiospores	-	-	-	-	
Bipolaris++	-	-	-	-	
Chaetomium	*High*	-	-	-	
Cladosporium	-	Rare	-	-	
Curvularia	-	-	-	-	
Epicoccum	-	-	-	-	
Fusarium	-	-	-	-	
Ganoderma	-	-	-	-	
Myxomycetes++	-	-	-	-	
Paecilomyces	-	-	-	-	
Rust	-	-	-	-	
Scopulariopsis	-	-	-	-	
Stachybotrys	-	-	-	-	
Torula	-	-	-	-	
Ulocladium	-	-	-	-	
Unidentifiable Spores	-	-	-	-	
Zygomycetes	-	-	-	-	
Aspergillus	*Rare*	-	-	-	
Penicillium	*Medium*	-	-	-	
Fibrous Particulate	-	-	-	-	
Hyphal Fragment	-	-	-	-	
Insect Fragment	-	-	-	-	
Pollen	-	-	-	-	

Sample Comment: 371220822-0003 None Detected
Sample Comment: 371220822-0004 None Detected

Category: Count/per area analyzed
Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut
* = Sample contains fruiting structures and/or hyphae associated with the spores.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation of the data contained in this report is the responsibility of the client. "-" denotes not detected. Samples received in good condition unless otherwise noted.
Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC–EMLAP Accredited #100194

Initial report from: 01/02/2013 09:38:05

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 371220822

Company : Cardno ATC	**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 171 Commerce Street PO Box 1486	
City: Williston **State/Province:** VT	**Zip/Postal Code:** 05495 **Country:** United States
Report To (Name): Jesse Stratton	**Telephone #:** 802-862-1980
Email Address: jesse.stratton@cardno.com	**Fax #:** **Purchase Order:**
Project Name/Number: 63.35078.0013	**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail
U.S. State Samples Taken: VT	**Connecticut Samples:** ☐ Commercial ☐ Residential

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements*

Non Culturable Air Samples (Spore Traps) – Test Codes

- **M001** Air-O-Cell
- **M049** BioSIS
- **M030** Micro 5
- **M173** Allegro M2
- **M003** Burkard
- **M174** MoldSnap
- **M004** Allergenco
- **M043** Cyclex
- **M176** Relle Smart
- **M032** Allergenco-D
- **M002** Cyclex-d
- **M130** Via-Cell
- **M172** Versa Trap

Other Microbiology Test Codes

- **M041** Fungal Direct Examination
- **M005** Viable Fungi ID and Count
- **M006** Viable Fungi ID and Count (Speciation)
- **M007** Culturable Fungi
- **M008** Culturable Fungi (Speciation)
- **M009** Gram Stain Culturable Bacteria
- **M010** Bacterial Count and ID – 3 Most Prominent
- **M011** Bacterial Count and ID – 5 Most Prominent
- **M013** Sewage Contamination in Buildings
- **M014** Endotoxin Analysis
- **M015** Heterotrophic Plate Count
- **M180** Real Time Q-PCR-ERMI 36 Panel
- **M018** Total Coliform (Membrane Filtration)
- **M020** Fecal *Streptococcus* (Membrane Filtration)
- **M210-215** *Legionella* Detection
- **M026** Recreational Water Screen
- **M027** Mycotoxin Analysis
- **M029** *Enterococci*
- **M019** Fecal Coliform
- **M133** MRSA Analysis
- **M028** *Cryptococcus neoformans* Detection
- **M120** *Histoplasma capsulatum* Detection
- **M033-39** Allergen Testing
- **M044** Group Allergen (Cat, Dog, Cockroach, Dustmites)
- **Other** See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: **Signature of Sampler:**

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
S-01	316 C bottom of stairs	Swab	M049	1 in²	12/28/12 1600
S-02	RM3 West wall water Joint	Swab	M041	1 in²	12/28/12 1605
S-03	RM16 NW Corner on Joists	Swab	M041	1 in²	12/28/12 1610
S-04	Blank	Swab	M041	1 in²	12/28/12 1620

Client Sample # (s): S-01 - S-04 **Total # of Samples:** 4

Relinquished (Client): **Date:** 12/28/12 **Time:** 1630

Received (Client): KD FX **Date:** 12-31-2012 **Time:** 8:40 AM

Comments:

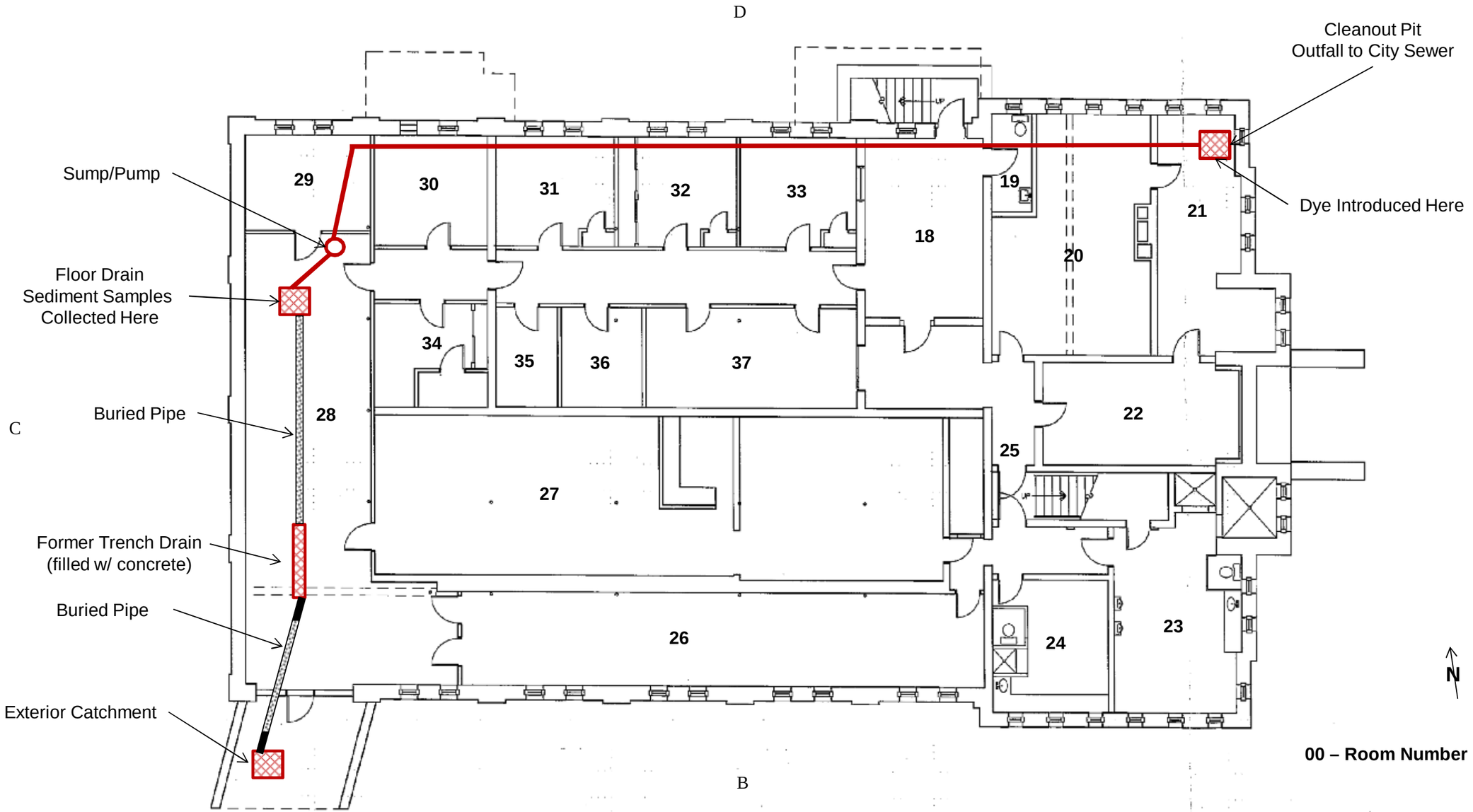
received HV 12/31/12

(4)

Appendix F

Diagram of Floor Drains and Sediment Samples
Sediment Sample Laboratory Report

Diagram of Floor Drains and Sediment Samples



SAMPLE LOCATION DIAGRAM - Drains

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

Sediment Sample Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 200-14287-1

Job Description: St. J Armory

For:
Cardno ATC
171 Commerce Street
PO BOX 1486
Williston, VT 05495

Attention: Mr. Stephen Znamierowski

Approved for release.
Sara S Goff
Project Manager I
2/5/2013 8:42 AM

Sara S Goff
Project Manager I
sara.goff@testamericainc.com
02/05/2013
Revision: 1

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

CASE NARRATIVE

Client: Cardno ATC

Project: St. J Armory

Report Number: 200-14287-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/19/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.0 C.

Client has revised Chain-of-Custody with sample identifiers that match what is recorded on the container labels.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples S-07 and S-08 were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/20/2012 and analyzed on 01/03/2013, 12/28/2012 and 12/31/2012.

Sample S-08 required a dilution which was performed outside of the analytical holding time. The original undiluted analysis which was performd within analytical hodling time has also been provided.

Due to poor aquisition of both low level sample aliquots the medium level aliquot was analyzed and reported.

Several analytes were detected in method blank MB 200-50187/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the volatiles analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS
Samples S-01 and S-02 were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 12/31/2012 and analyzed on 01/04/2013.

Samples S-01[3X] and S-02[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

METALS (ICP)
Samples S-05 and S-06 were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 12/28/2012 and analyzed on 12/29/2012.

The serial dilution performed for sample S-05 was outside control limits for Chromium, Copper, Nickle, and Zinc. The post digestion spike percent recovery for sample S-05 was outside of control limits for Beryllium, Cadmium, Chromium, Copper, Nickle, Selenium, and Zinc.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

MERCURY
Samples S-03 and S-04 were analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared on 12/26/2012 and analyzed on 12/28/2012.

Hg was detected in method blank MB 200-50058/11-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: Cardno ATC

Job Number: 200-14287-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
200-14287-1	S-01					
Diesel Range Organics [C10-C28]		120		24	mg/Kg	8015B
Percent Solids		84.1		0.25	%	Moisture
200-14287-2	S-02					
Diesel Range Organics [C10-C28]		170		41	mg/Kg	8015B
Percent Solids		82.3		0.25	%	Moisture
200-14287-3	S-03					
Hg		0.063	B	0.036	mg/Kg	7471B
Percent Solids		84.2		0.25	%	Moisture
200-14287-4	S-04					
Hg		0.054	B	0.035	mg/Kg	7471B
Percent Solids		86.7		0.25	%	Moisture
200-14287-5	S-05					
Antimony		0.54	J	5.3	mg/Kg	6010C
Arsenic		2.5		0.88	mg/Kg	6010C
Beryllium		0.38	J	0.44	mg/Kg	6010C
Cadmium		0.45		0.44	mg/Kg	6010C
Chromium		19.3		0.88	mg/Kg	6010C
Copper		56.4		2.2	mg/Kg	6010C
Lead		62.1		0.88	mg/Kg	6010C
Nickel		20.1		3.5	mg/Kg	6010C
Zinc		101		1.8	mg/Kg	6010C
Percent Solids		84.0		0.25	%	Moisture
200-14287-6	S-06					
Antimony		0.57	J	3.7	mg/Kg	6010C
Arsenic		2.0		0.62	mg/Kg	6010C
Beryllium		0.34		0.31	mg/Kg	6010C
Cadmium		0.59		0.31	mg/Kg	6010C
Chromium		18.3		0.62	mg/Kg	6010C
Copper		53.1		1.5	mg/Kg	6010C
Lead		82.6		0.62	mg/Kg	6010C
Nickel		18.4		2.5	mg/Kg	6010C
Zinc		127		1.2	mg/Kg	6010C
Percent Solids		85.5		0.25	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Cardno ATC

Job Number: 200-14287-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
200-14287-7	S-07					
Bromomethane		37	J	120	ug/Kg	8260B
Acetone		310	J	600	ug/Kg	8260B
Methyl acetate		120		120	ug/Kg	8260B
Percent Solids		84.2		0.25	%	Moisture
200-14287-8	S-08					
Acetone		6000	H	620	ug/Kg	8260B
Acetone		1200	E	5.0	ug/Kg	8260B
Methyl acetate		130	H	120	ug/Kg	8260B
Styrene		47	J H	120	ug/Kg	8260B
1,2,4-Trichlorobenzene		0.42	J B	5.0	ug/Kg	8260B
Naphthalene		0.80	J B	5.0	ug/Kg	8260B
1,2,3-Trichlorobenzene		0.42	J B	5.0	ug/Kg	8260B
Percent Solids		86.7		0.25	%	Moisture

METHOD SUMMARY

Client: Cardno ATC

Job Number: 200-14287-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Closed System Purge and Trap	TAL BUR		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Purge and Trap	TAL BUR		SW846 5035
Diesel Range Organics (DRO) (GC)	TAL BUR	SW846 8015B	
Ultrasonic Extraction	TAL BUR		SW846 3550C
Metals (ICP)	TAL BUR	SW846 6010C	
Preparation, Metals	TAL BUR		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL BUR	SW846 7471B	
Preparation, Mercury	TAL BUR		SW846 7471B
Percent Moisture	TAL BUR	EPA Moisture	

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Cardno ATC

Job Number: 200-14287-1

Method	Analyst	Analyst ID
SW846 8260B	Keene, Angela H	AHK
SW846 8260B	Phillips, Mark T	MTP
SW846 8015B	Wilbur, Janelle S	JSW
SW846 6010C	Kvasnak, Ethan T	ETK
SW846 7471B	Pham, Vu T	VTP
EPA Moisture	Fodge, John F	JFF
EPA Moisture	Kirchner, Benjamin	HO

SAMPLE SUMMARY

Client: Cardno ATC

Job Number: 200-14287-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-14287-1	S-01	Solid	12/17/2012 1112	12/19/2012 1530
200-14287-2	S-02	Solid	12/17/2012 1112	12/19/2012 1530
200-14287-3	S-03	Solid	12/17/2012 1119	12/19/2012 1530
200-14287-4	S-04	Solid	12/17/2012 1119	12/19/2012 1530
200-14287-5	S-05	Solid	12/17/2012 1126	12/19/2012 1530
200-14287-6	S-06	Solid	12/17/2012 1126	12/19/2012 1530
200-14287-7	S-07	Solid	12/18/2012 1100	12/19/2012 1530
200-14287-8	S-08	Solid	12/18/2012 1101	12/19/2012 1530

SAMPLE RESULTS

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-07

Lab Sample ID: 200-14287-7
Client Matrix: Solid

% Moisture: 15.8

Date Sampled: 12/18/2012 1100
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50167	Instrument ID:	L.i
Prep Method:	5035	Prep Batch:	200-49811	Lab File ID:	lilc08.d
Dilution:	1.0			Initial Weight/Volume:	5.359 g
Analysis Date:	12/31/2012 1332			Final Weight/Volume:	10 mL
Prep Date:	12/20/2012 0937				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		120	U	25	120
Chloromethane		120	U	31	120
Vinyl chloride		120	U	24	120
Bromomethane		37	J	30	120
Chloroethane		120	U	18	120
Trichlorofluoromethane		120	U	16	120
1,1-Dichloroethene		120	U	26	120
Freon TF		120	U	22	120
Acetone		310	J	110	600
Methyl iodide		120	U	8.9	120
Carbon disulfide		120	U	19	120
Methyl acetate		120		25	120
Methylene Chloride		120	U	32	120
trans-1,2-Dichloroethene		120	U	24	120
1,2-Dichloroethene, Total		120	U	22	120
Methyl t-butyl ether		120	U	22	120
1,1-Dichloroethane		120	U	24	120
Vinyl acetate		120	U	53	120
2,2-Dichloropropane		120	U	26	120
cis-1,2-Dichloroethene		120	U	22	120
2-Butanone		600	U	100	600
Bromochloromethane		120	U	23	120
Tetrahydrofuran		1700	U	270	1700
Chloroform		120	U	23	120
1,1,1-Trichloroethane		120	U	24	120
Cyclohexane		120	U	24	120
1,1-Dichloropropene		120	U	24	120
Carbon tetrachloride		120	U	18	120
Isobutyl alcohol		6000	U	1100	6000
Benzene		120	U	25	120
1,2-Dichloroethane		120	U	20	120
Trichloroethene		120	U	20	120
Methylcyclohexane		120	U	22	120
1,2-Dichloropropane		120	U	23	120
Dibromomethane		120	U	23	120
1,4-Dioxane		6000	U	1300	6000
Bromodichloromethane		120	U	23	120
2-Chloroethyl vinyl ether		120	U	20	120
cis-1,3-Dichloropropene		120	U	22	120
4-Methyl-2-pentanone		600	U	130	600
Toluene		120	U	24	120
trans-1,3-Dichloropropene		120	U	20	120
1,1,2-Trichloroethane		120	U	23	120
Tetrachloroethene		120	U	24	120
1,3-Dichloropropane		120	U	19	120
2-Hexanone		600	U	93	600

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-07

Lab Sample ID: 200-14287-7
Client Matrix: Solid

% Moisture: 15.8

Date Sampled: 12/18/2012 1100
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B
Prep Method: 5035
Dilution: 1.0
Analysis Date: 12/31/2012 1332
Prep Date: 12/20/2012 0937

Analysis Batch: 200-50167
Prep Batch: 200-49811

Instrument ID: L.i
Lab File ID: lilc08.d
Initial Weight/Volume: 5.359 g
Final Weight/Volume: 10 mL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dibromochloromethane		120	U	19	120
1,2-Dibromoethane		120	U	23	120
Chlorobenzene		120	U	24	120
1,1,1,2-Tetrachloroethane		120	U	24	120
Ethylbenzene		120	U	24	120
m&p-Xylene		120	U	45	120
o-Xylene		120	U	25	120
Xylenes, Total		120	U	25	120
Styrene		120	U	20	120
Bromoform		120	U	20	120
Isopropylbenzene		120	U	23	120
Bromobenzene		120	U	24	120
1,1,2,2-Tetrachloroethane		120	U	22	120
1,2,3-Trichloropropane		120	U	22	120
n-Propylbenzene		120	U	24	120
2-Chlorotoluene		120	U	26	120
4-Chlorotoluene		120	U	26	120
1,3,5-Trimethylbenzene		120	U	24	120
tert-Butylbenzene		120	U	22	120
1,2,4-Trimethylbenzene		120	U	22	120
sec-Butylbenzene		120	U	23	120
1,3-Dichlorobenzene		120	U	23	120
4-Isopropyltoluene		120	U	23	120
1,4-Dichlorobenzene		120	U	23	120
1,2-Dichlorobenzene		120	U	24	120
n-Butylbenzene		120	U	23	120
1,2-Dibromo-3-Chloropropane		120	U	20	120
1,2,4-Trichlorobenzene		120	U	24	120
Hexachlorobutadiene		120	U	19	120
Naphthalene		120	U	18	120
1,2,3-Trichlorobenzene		120	U	23	120

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	94		80 - 120
Toluene-d8	96		80 - 120
Bromofluorobenzene	92		80 - 125
1,2-Dichlorobenzene-d4	89		75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50254	Instrument ID:	L.i
Prep Method:	5035	Prep Batch:	200-49811	Lab File ID:	lilf08.d
Dilution:	1.0			Initial Weight/Volume:	4.951 g
Analysis Date:	01/03/2013 0105			Final Weight/Volume:	10 mL
Prep Date:	12/20/2012 0937				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		120	U H	26	120
Chloromethane		120	U H	32	120
Vinyl chloride		120	U H	25	120
Bromomethane		120	U H	31	120
Chloroethane		120	U H	19	120
Trichlorofluoromethane		120	U H	16	120
1,1-Dichloroethene		120	U H	27	120
Freon TF		120	U H	22	120
Acetone		6000	H	110	620
Methyl iodide		120	U H	9.2	120
Carbon disulfide		120	U H	20	120
Methyl acetate		130	H	26	120
Methylene Chloride		120	U H	34	120
trans-1,2-Dichloroethene		120	U H	25	120
1,2-Dichloroethene, Total		120	U H	22	120
Methyl t-butyl ether		120	U H	22	120
1,1-Dichloroethane		120	U H	25	120
Vinyl acetate		120	U H	55	120
2,2-Dichloropropane		120	U H	27	120
cis-1,2-Dichloroethene		120	U H	22	120
2-Butanone		620	U H	110	620
Bromochloromethane		120	U H	24	120
Tetrahydrofuran		1700	U H	270	1700
Chloroform		120	U H	24	120
1,1,1-Trichloroethane		120	U H	25	120
Cyclohexane		120	U H	25	120
1,1-Dichloropropene		120	U H	25	120
Carbon tetrachloride		120	U H	19	120
Isobutyl alcohol		6200	U H	1200	6200
Benzene		120	U H	26	120
1,2-Dichloroethane		120	U H	21	120
Trichloroethene		120	U H	21	120
Methylcyclohexane		120	U H	22	120
1,2-Dichloropropane		120	U H	24	120
Dibromomethane		120	U H	24	120
1,4-Dioxane		6200	U H	1400	6200
Bromodichloromethane		120	U H	24	120
2-Chloroethyl vinyl ether		120	U H	21	120
cis-1,3-Dichloropropene		120	U H	22	120
4-Methyl-2-pentanone		620	U H	130	620
Toluene		120	U H	25	120
trans-1,3-Dichloropropene		120	U H	21	120
1,1,2-Trichloroethane		120	U H	24	120
Tetrachloroethene		120	U H	25	120
1,3-Dichloropropane		120	U H	20	120
2-Hexanone		620	U H	96	620

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50254	Instrument ID:	L.i
Prep Method:	5035	Prep Batch:	200-49811	Lab File ID:	lif08.d
Dilution:	1.0			Initial Weight/Volume:	4.951 g
Analysis Date:	01/03/2013 0105			Final Weight/Volume:	10 mL
Prep Date:	12/20/2012 0937				

Analyte (DryWt Corrected: Y)	Result (ug/Kg)	Qualifier	MDL	RL
Dibromochloromethane	120	U H	20	120
1,2-Dibromoethane	120	U H	24	120
Chlorobenzene	120	U H	25	120
1,1,1,2-Tetrachloroethane	120	U H	25	120
Ethylbenzene	120	U H	25	120
m&p-Xylene	120	U H	46	120
o-Xylene	120	U H	26	120
Xylenes, Total	120	U H	26	120
Styrene	47	J H	21	120
Bromoform	120	U H	21	120
Isopropylbenzene	120	U H	24	120
Bromobenzene	120	U H	25	120
1,1,2,2-Tetrachloroethane	120	U H	22	120
1,2,3-Trichloropropane	120	U H	22	120
n-Propylbenzene	120	U H	25	120
2-Chlorotoluene	120	U H	27	120
4-Chlorotoluene	120	U H	27	120
1,3,5-Trimethylbenzene	120	U H	25	120
tert-Butylbenzene	120	U H	22	120
1,2,4-Trimethylbenzene	120	U H	22	120
sec-Butylbenzene	120	U H	24	120
1,3-Dichlorobenzene	120	U H	24	120
4-Isopropyltoluene	120	U H	24	120
1,4-Dichlorobenzene	120	U H	24	120
1,2-Dichlorobenzene	120	U H	25	120
n-Butylbenzene	120	U H	24	120
1,2-Dibromo-3-Chloropropane	120	U H	21	120
1,2,4-Trichlorobenzene	120	U H	25	120
Hexachlorobutadiene	120	U H	20	120
Naphthalene	120	U H	19	120
1,2,3-Trichlorobenzene	120	U H	24	120

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	97		80 - 120
Toluene-d8	95		80 - 120
Bromofluorobenzene	94		80 - 125
1,2-Dichlorobenzene-d4	86		75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B
Prep Method: 5035
Dilution: 1.0
Analysis Date: 12/28/2012 1400
Prep Date: 12/20/2012 0945

Analysis Batch: 200-50187
Prep Batch: 200-49812

Instrument ID: N.i
Lab File ID: nhma09.d
Initial Weight/Volume: 5.746 g
Final Weight/Volume: 5 mL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		5.0	U	0.35	5.0
Chloromethane		5.0	U	0.39	5.0
Vinyl chloride		5.0	U	0.30	5.0
Bromomethane		5.0	U	1.2	5.0
Chloroethane		5.0	U	0.39	5.0
Trichlorofluoromethane		5.0	U	0.27	5.0
1,1-Dichloroethene		5.0	U	0.39	5.0
Freon TF		5.0	U	0.31	5.0
Acetone		1200	E	2.1	5.0
Methyl iodide		5.0	U	0.65	5.0
Carbon disulfide		5.0	U	0.27	5.0
Methyl acetate		5.0	U	0.84	5.0
Methylene Chloride		5.0	U	0.40	5.0
trans-1,2-Dichloroethene		5.0	U	0.37	5.0
1,2-Dichloroethene, Total		5.0	U	0.35	5.0
Methyl t-butyl ether		5.0	U	0.41	5.0
1,1-Dichloroethane		5.0	U	0.34	5.0
Vinyl acetate		5.0	U	0.67	5.0
2,2-Dichloropropane		5.0	U	0.54	5.0
cis-1,2-Dichloroethene		5.0	U	0.35	5.0
2-Butanone		5.0	U	1.3	5.0
Bromochloromethane		5.0	U	0.33	5.0
Tetrahydrofuran		50	U	7.3	50
Chloroform		5.0	U	0.35	5.0
1,1,1-Trichloroethane		5.0	U	0.31	5.0
Cyclohexane		5.0	U	0.30	5.0
1,1-Dichloropropene		5.0	U	0.26	5.0
Carbon tetrachloride		5.0	U	0.29	5.0
Isobutyl alcohol		250	U	23	250
Benzene		5.0	U	0.32	5.0
1,2-Dichloroethane		5.0	U	0.39	5.0
Trichloroethene		5.0	U	0.36	5.0
Methylcyclohexane		5.0	U	0.26	5.0
1,2-Dichloropropane		5.0	U	0.33	5.0
Dibromomethane		5.0	U	0.34	5.0
1,4-Dioxane		250	U	15	250
Bromodichloromethane		5.0	U	0.36	5.0
2-Chloroethyl vinyl ether		5.0	U	0.23	5.0
cis-1,3-Dichloropropene		5.0	U	0.29	5.0
4-Methyl-2-pentanone		5.0	U	0.50	5.0
Toluene		5.0	U	0.11	5.0
trans-1,3-Dichloropropene		5.0	U	0.29	5.0
1,1,2-Trichloroethane		5.0	U	0.36	5.0
Tetrachloroethene		5.0	U	0.10	5.0
1,3-Dichloropropane		5.0	U	0.46	5.0
2-Hexanone		5.0	U	0.63	5.0

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50187	Instrument ID:	N.i
Prep Method:	5035	Prep Batch:	200-49812	Lab File ID:	nhma09.d
Dilution:	1.0			Initial Weight/Volume:	5.746 g
Analysis Date:	12/28/2012 1400			Final Weight/Volume:	5 mL
Prep Date:	12/20/2012 0945				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dibromochloromethane		5.0	U	0.31	5.0
1,2-Dibromoethane		5.0	U	0.41	5.0
Chlorobenzene		5.0	U	0.16	5.0
1,1,1,2-Tetrachloroethane		5.0	U	0.060	5.0
Ethylbenzene		5.0	U	0.070	5.0
m&p-Xylene		5.0	U	0.25	5.0
o-Xylene		5.0	U	0.080	5.0
Xylenes, Total		5.0	U	0.080	5.0
Styrene		5.0	U	0.12	5.0
Bromoform		5.0	U	0.32	5.0
Isopropylbenzene		5.0	U	0.34	5.0
Bromobenzene		5.0	U	0.31	5.0
1,1,2,2-Tetrachloroethane		5.0	U	0.97	5.0
1,2,3-Trichloropropane		5.0	U	0.82	5.0
n-Propylbenzene		5.0	U	0.070	5.0
2-Chlorotoluene		5.0	U	0.35	5.0
4-Chlorotoluene		5.0	U	0.25	5.0
1,3,5-Trimethylbenzene		5.0	U	0.20	5.0
tert-Butylbenzene		5.0	U	0.26	5.0
1,2,4-Trimethylbenzene		5.0	U	0.050	5.0
sec-Butylbenzene		5.0	U	0.25	5.0
1,3-Dichlorobenzene		5.0	U	0.11	5.0
4-Isopropyltoluene		5.0	U	0.090	5.0
1,4-Dichlorobenzene		5.0	U	0.22	5.0
1,2-Dichlorobenzene		5.0	U	0.10	5.0
n-Butylbenzene		5.0	U	0.29	5.0
1,2-Dibromo-3-Chloropropane		5.0	U	0.96	5.0
1,2,4-Trichlorobenzene		0.42	J B	0.32	5.0
Hexachlorobutadiene		5.0	U	0.46	5.0
Naphthalene		0.80	J B	0.57	5.0
1,2,3-Trichlorobenzene		0.42	J B	0.37	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	94		35 - 145
Toluene-d8	100		40 - 175
Bromofluorobenzene	126		30 - 200
1,2-Dichlorobenzene-d4	94		20 - 185

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-01

Lab Sample ID: 200-14287-1
Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 12/17/2012 1112
Date Received: 12/19/2012 1530

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Prep Method:	3550C	Prep Batch:	200-50113	Initial Weight/Volume:	29.83 g
Dilution:	3.0			Final Weight/Volume:	2000 uL
Analysis Date:	01/04/2013 1418			Injection Volume:	1 uL
Prep Date:	12/31/2012 0939			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10-C28]		120		3.6	24

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	88		40 - 125

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-02

Lab Sample ID: 200-14287-2
Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 12/17/2012 1112
Date Received: 12/19/2012 1530

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Prep Method:	3550C	Prep Batch:	200-50113	Initial Weight/Volume:	30.00 g
Dilution:	5.0			Final Weight/Volume:	2000 uL
Analysis Date:	01/04/2013 1504			Injection Volume:	1 uL
Prep Date:	12/31/2012 0939			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10-C28]		170		6.1	41

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	102		40 - 125

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-03

Lab Sample ID: 200-14287-3
Client Matrix: Solid

% Moisture: 15.8

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Prep Method:	7471B	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0			Initial Weight/Volume:	0.33 g
Analysis Date:	12/28/2012 1249			Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Hg		0.063	B	0.0024	0.036

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-04

Lab Sample ID: 200-14287-4
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Prep Method:	7471B	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0			Initial Weight/Volume:	0.33 g
Analysis Date:	12/28/2012 1256			Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Hg		0.054	B	0.0023	0.035

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-05

Lab Sample ID: 200-14287-5
Client Matrix: Solid

% Moisture: 16.0

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	200-50092	Instrument ID:	METICP7
Prep Method:	3050B	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0			Initial Weight/Volume:	1.35 g
Analysis Date:	12/29/2012 0156			Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.54	J	0.43	5.3
Arsenic		2.5		0.49	0.88
Beryllium		0.38	J	0.028	0.44
Cadmium		0.45		0.069	0.44
Chromium		19.3		0.097	0.88
Copper		56.4		0.19	2.2
Lead		62.1		0.39	0.88
Nickel		20.1		0.26	3.5
Selenium		3.1	U	0.77	3.1
Silver		0.88	U	0.11	0.88
Thallium		2.2	U	0.36	2.2
Zinc		101		0.49	1.8

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-06

Lab Sample ID: 200-14287-6
Client Matrix: Solid

% Moisture: 14.5

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	200-50092	Instrument ID:	METICP7
Prep Method:	3050B	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0			Initial Weight/Volume:	1.90 g
Analysis Date:	12/29/2012 0211			Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.57	J	0.30	3.7
Arsenic		2.0		0.34	0.62
Beryllium		0.34		0.020	0.31
Cadmium		0.59		0.048	0.31
Chromium		18.3		0.068	0.62
Copper		53.1		0.14	1.5
Lead		82.6		0.27	0.62
Nickel		18.4		0.18	2.5
Selenium		2.2	U	0.54	2.2
Silver		0.62	U	0.080	0.62
Thallium		1.5	U	0.25	1.5
Zinc		127		0.34	1.2

Client: Cardno ATC

Job Number: 200-14287-1

General Chemistry

Client Sample ID: S-01

Lab Sample ID: 200-14287-1
Client Matrix: Solid

Date Sampled: 12/17/2012 1112
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.1		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-02

Lab Sample ID: 200-14287-2

Client Matrix: Solid

Date Sampled: 12/17/2012 1112

Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	82.3		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515

DryWt Corrected: N

General Chemistry

Client Sample ID: S-03

Lab Sample ID: 200-14287-3
Client Matrix: Solid

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.2		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-04

Lab Sample ID: 200-14287-4
Client Matrix: Solid

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	86.7		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-05

Lab Sample ID: 200-14287-5
Client Matrix: Solid

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.0		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-06

Lab Sample ID: 200-14287-6
Client Matrix: Solid

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	85.5		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515

DryWt Corrected: N

General Chemistry

Client Sample ID: **S-07**

Lab Sample ID: 200-14287-7
Client Matrix: Solid

Date Sampled: 12/18/2012 1100
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.2		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50565 Analysis Date: 01/11/2013 1433 DryWt Corrected: N

General Chemistry

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	86.7		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50565 Analysis Date: 01/11/2013 1433

DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: Cardno ATC

Job Number: 200-14287-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
Metals		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 200-49811					
200-14287-7	S-07	T	Solid	5035	
200-14287-8	S-08	T	Solid	5035	
Prep Batch: 200-49812					
200-14287-8	S-08	T	Solid	5035	
Prep Batch: 200-50119					
LCS 200-50119/6-A	Lab Control Sample	T	Solid	5035	
LCS 200-50119/7-A	Lab Control Sample	T	Solid	5035	
MB 200-50119/1-A	Method Blank	T	Solid	5035	
MB 200-50119/2-A	Method Blank	T	Solid	5035	
Analysis Batch:200-50167					
LCS 200-50119/6-A	Lab Control Sample	T	Solid	8260B	200-50119
MB 200-50119/1-A	Method Blank	T	Solid	8260B	200-50119
200-14287-7	S-07	T	Solid	8260B	200-49811
Analysis Batch:200-50187					
LCS 200-50187/3	Lab Control Sample	T	Solid	8260B	
MB 200-50187/5	Method Blank	T	Solid	8260B	
200-14287-8	S-08	T	Solid	8260B	200-49812
Analysis Batch:200-50254					
LCS 200-50119/7-A	Lab Control Sample	T	Solid	8260B	200-50119
MB 200-50119/2-A	Method Blank	T	Solid	8260B	200-50119
200-14287-8	S-08	T	Solid	8260B	200-49811

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 200-50113					
LCS 200-50113/2-A	Lab Control Sample	T	Solid	3550C	
MB 200-50113/1-A	Method Blank	T	Solid	3550C	
200-14287-1	S-01	T	Solid	3550C	
200-14287-2	S-02	T	Solid	3550C	
Analysis Batch:200-50263					
LCS 200-50113/2-A	Lab Control Sample	T	Solid	8015B	200-50113
MB 200-50113/1-A	Method Blank	T	Solid	8015B	200-50113
200-14287-1	S-01	T	Solid	8015B	200-50113
200-14287-2	S-02	T	Solid	8015B	200-50113

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 200-50058					
LCS 200-50058/12-A	Lab Control Sample	T	Solid	7471B	
MB 200-50058/11-A	Method Blank	T	Solid	7471B	
200-14287-3	S-03	T	Solid	7471B	
200-14287-3DU	Duplicate	T	Solid	7471B	
200-14287-3MS	Matrix Spike	T	Solid	7471B	
200-14287-4	S-04	T	Solid	7471B	
Prep Batch: 200-50062					
LCS 200-50062/2-A	Lab Control Sample	T	Solid	3050B	
MB 200-50062/1-A	Method Blank	T	Solid	3050B	
200-14287-5	S-05	T	Solid	3050B	
200-14287-6	S-06	T	Solid	3050B	
Analysis Batch:200-50092					
LCS 200-50062/2-A	Lab Control Sample	T	Solid	6010C	200-50062
MB 200-50062/1-A	Method Blank	T	Solid	6010C	200-50062
200-14287-5	S-05	T	Solid	6010C	200-50062
200-14287-6	S-06	T	Solid	6010C	200-50062
Analysis Batch:200-50205					
LCS 200-50058/12-A	Lab Control Sample	T	Solid	7471B	200-50058
MB 200-50058/11-A	Method Blank	T	Solid	7471B	200-50058
200-14287-3	S-03	T	Solid	7471B	200-50058
200-14287-3DU	Duplicate	T	Solid	7471B	200-50058
200-14287-3MS	Matrix Spike	T	Solid	7471B	200-50058
200-14287-4	S-04	T	Solid	7471B	200-50058

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:200-50231					
200-14287-1	S-01	T	Solid	Moisture	
200-14287-2	S-02	T	Solid	Moisture	
200-14287-3	S-03	T	Solid	Moisture	
200-14287-4	S-04	T	Solid	Moisture	
200-14287-5	S-05	T	Solid	Moisture	
200-14287-6	S-06	T	Solid	Moisture	
Analysis Batch:200-50565					
200-14287-7	S-07	T	Solid	Moisture	
200-14287-8	S-08	T	Solid	Moisture	

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DCZ %Rec
200-14287-8	S-08	94	100	126	94
MB 200-50187/5		94	94	96	95
LCS 200-50187/3		93	94	93	91

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4	35-145
TOL = Toluene-d8	40-175
BFB = Bromofluorobenzene	30-200
DCZ = 1,2-Dichlorobenzene-d4	20-185

Client: Cardno ATC

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DCZ %Rec
200-14287-7	S-07	94	96	92	89
200-14287-8	S-08	97	95	94	86
MB 200-50119/1-A		92	92	91	87
MB 200-50119/2-A		95	94	94	87
LCS 200-50119/6-A		93	95	90	86
LCS 200-50119/7-A		94	96	95	88

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4	80-120
TOL = Toluene-d8	80-120
BFB = Bromofluorobenzene	80-125
DCZ = 1,2-Dichlorobenzene-d4	75-120

Client: Cardno ATC

Job Number: 200-14287-1

Surrogate Recovery Report

8015B Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec
200-14287-1	S-01	88
200-14287-2	S-02	102
MB 200-50113/1-A		86
LCS 200-50113/2-A		91

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	40-125

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/1-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1300	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorodifluoromethane	100	U	21	100
Chloromethane	100	U	26	100
Vinyl chloride	100	U	20	100
Bromomethane	100	U	25	100
Chloroethane	100	U	15	100
Trichlorofluoromethane	100	U	13	100
1,1-Dichloroethene	100	U	22	100
Freon TF	100	U	18	100
Acetone	500	U	89	500
Methyl iodide	100	U	7.4	100
Carbon disulfide	100	U	16	100
Methyl acetate	100	U	21	100
Methylene Chloride	100	U	27	100
trans-1,2-Dichloroethene	100	U	20	100
1,2-Dichloroethene, Total	100	U	18	100
Methyl t-butyl ether	100	U	18	100
1,1-Dichloroethane	100	U	20	100
Vinyl acetate	100	U	44	100
2,2-Dichloropropane	100	U	22	100
cis-1,2-Dichloroethene	100	U	18	100
2-Butanone	500	U	86	500
Bromochloromethane	100	U	19	100
Tetrahydrofuran	1400	U	220	1400
Chloroform	100	U	19	100
1,1,1-Trichloroethane	100	U	20	100
Cyclohexane	100	U	20	100
1,1-Dichloropropene	100	U	20	100
Carbon tetrachloride	100	U	15	100
Isobutyl alcohol	5000	U	930	5000
Benzene	100	U	21	100
1,2-Dichloroethane	100	U	17	100
Trichloroethene	100	U	17	100
Methylcyclohexane	100	U	18	100
1,2-Dichloropropane	100	U	19	100
Dibromomethane	100	U	19	100
1,4-Dioxane	5000	U	1100	5000
Bromodichloromethane	100	U	19	100
2-Chloroethyl vinyl ether	100	U	17	100
cis-1,3-Dichloropropene	100	U	18	100
4-Methyl-2-pentanone	500	U	110	500
Toluene	100	U	20	100
trans-1,3-Dichloropropene	100	U	17	100
1,1,2-Trichloroethane	100	U	19	100
Tetrachloroethene	100	U	20	100
1,3-Dichloropropane	100	U	16	100

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/1-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1300	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Hexanone	500	U	77	500
Dibromochloromethane	100	U	16	100
1,2-Dibromoethane	100	U	19	100
Chlorobenzene	100	U	20	100
1,1,1,2-Tetrachloroethane	100	U	20	100
Ethylbenzene	100	U	20	100
m&p-Xylene	100	U	37	100
o-Xylene	100	U	21	100
Xylenes, Total	100	U	21	100
Styrene	100	U	17	100
Bromoform	100	U	17	100
Isopropylbenzene	100	U	19	100
Bromobenzene	100	U	20	100
1,1,2,2-Tetrachloroethane	100	U	18	100
1,2,3-Trichloropropane	100	U	18	100
n-Propylbenzene	100	U	20	100
2-Chlorotoluene	100	U	22	100
4-Chlorotoluene	100	U	22	100
1,3,5-Trimethylbenzene	100	U	20	100
tert-Butylbenzene	100	U	18	100
1,2,4-Trimethylbenzene	100	U	18	100
sec-Butylbenzene	100	U	19	100
1,3-Dichlorobenzene	100	U	19	100
4-Isopropyltoluene	100	U	19	100
1,4-Dichlorobenzene	100	U	19	100
1,2-Dichlorobenzene	100	U	20	100
n-Butylbenzene	100	U	19	100
1,2-Dibromo-3-Chloropropane	100	U	17	100
1,2,4-Trichlorobenzene	100	U	20	100
Hexachlorobutadiene	100	U	16	100
Naphthalene	100	U	15	100
1,2,3-Trichlorobenzene	100	U	19	100

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	92	80 - 120
Toluene-d8	92	80 - 120
Bromofluorobenzene	91	80 - 125
1,2-Dichlorobenzene-d4	87	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/2-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/03/2013 0023	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorodifluoromethane	100	U	21	100
Chloromethane	100	U	26	100
Vinyl chloride	100	U	20	100
Bromomethane	100	U	25	100
Chloroethane	100	U	15	100
Trichlorofluoromethane	100	U	13	100
1,1-Dichloroethene	100	U	22	100
Freon TF	100	U	18	100
Acetone	500	U	89	500
Methyl iodide	100	U	7.4	100
Carbon disulfide	100	U	16	100
Methyl acetate	100	U	21	100
Methylene Chloride	100	U	27	100
trans-1,2-Dichloroethene	100	U	20	100
1,2-Dichloroethene, Total	100	U	18	100
Methyl t-butyl ether	100	U	18	100
1,1-Dichloroethane	100	U	20	100
Vinyl acetate	100	U	44	100
2,2-Dichloropropane	100	U	22	100
cis-1,2-Dichloroethene	100	U	18	100
2-Butanone	500	U	86	500
Bromochloromethane	100	U	19	100
Tetrahydrofuran	1400	U	220	1400
Chloroform	100	U	19	100
1,1,1-Trichloroethane	100	U	20	100
Cyclohexane	100	U	20	100
1,1-Dichloropropene	100	U	20	100
Carbon tetrachloride	100	U	15	100
Isobutyl alcohol	5000	U	930	5000
Benzene	100	U	21	100
1,2-Dichloroethane	100	U	17	100
Trichloroethene	100	U	17	100
Methylcyclohexane	100	U	18	100
1,2-Dichloropropane	100	U	19	100
Dibromomethane	100	U	19	100
1,4-Dioxane	5000	U	1100	5000
Bromodichloromethane	100	U	19	100
2-Chloroethyl vinyl ether	100	U	17	100
cis-1,3-Dichloropropene	100	U	18	100
4-Methyl-2-pentanone	500	U	110	500
Toluene	100	U	20	100
trans-1,3-Dichloropropene	100	U	17	100
1,1,2-Trichloroethane	100	U	19	100
Tetrachloroethene	100	U	20	100
1,3-Dichloropropane	100	U	16	100

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/2-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/03/2013 0023	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Hexanone	500	U	77	500
Dibromochloromethane	100	U	16	100
1,2-Dibromoethane	100	U	19	100
Chlorobenzene	100	U	20	100
1,1,1,2-Tetrachloroethane	100	U	20	100
Ethylbenzene	100	U	20	100
m&p-Xylene	100	U	37	100
o-Xylene	100	U	21	100
Xylenes, Total	100	U	21	100
Styrene	100	U	17	100
Bromoform	100	U	17	100
Isopropylbenzene	100	U	19	100
Bromobenzene	100	U	20	100
1,1,2,2-Tetrachloroethane	100	U	18	100
1,2,3-Trichloropropane	100	U	18	100
n-Propylbenzene	100	U	20	100
2-Chlorotoluene	100	U	22	100
4-Chlorotoluene	100	U	22	100
1,3,5-Trimethylbenzene	100	U	20	100
tert-Butylbenzene	100	U	18	100
1,2,4-Trimethylbenzene	100	U	18	100
sec-Butylbenzene	100	U	19	100
1,3-Dichlorobenzene	100	U	19	100
4-Isopropyltoluene	100	U	19	100
1,4-Dichlorobenzene	100	U	19	100
1,2-Dichlorobenzene	100	U	20	100
n-Butylbenzene	100	U	19	100
1,2-Dibromo-3-Chloropropane	100	U	17	100
1,2,4-Trichlorobenzene	100	U	20	100
Hexachlorobutadiene	100	U	16	100
Naphthalene	100	U	15	100
1,2,3-Trichlorobenzene	100	U	19	100

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	95	80 - 120
Toluene-d8	94	80 - 120
Bromofluorobenzene	94	80 - 125
1,2-Dichlorobenzene-d4	87	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/6-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1123	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	2500	1840	74	35 - 125	
Chloromethane	2500	1900	76	65 - 120	
Vinyl chloride	2500	2370	95	80 - 130	
Bromomethane	2500	1320	53	40 - 120	
Chloroethane	2500	1140	46	40 - 120	
Trichlorofluoromethane	2500	1510	60	40 - 120	
1,1-Dichloroethene	2500	2760	110	80 - 120	
Freon TF	2500	2370	95	70 - 120	
Acetone	12500	14900	119	15 - 200	
Methyl iodide	2500	2230	89	45 - 150	
Carbon disulfide	2500	2370	95	80 - 120	
Methyl acetate	2500	2060	83	70 - 120	
Methylene Chloride	2500	2560	102	80 - 120	
trans-1,2-Dichloroethene	2500	2620	105	80 - 125	
Methyl t-butyl ether	2500	2490	100	80 - 120	
1,1-Dichloroethane	2500	2570	103	80 - 120	
Vinyl acetate	2500	3080	123	80 - 200	
2,2-Dichloropropane	2500	2650	106	80 - 120	
cis-1,2-Dichloroethene	2500	2510	100	80 - 125	
2-Butanone	12500	14500	116	60 - 170	
Bromochloromethane	2500	2230	89	80 - 130	
Tetrahydrofuran	35000	35800	102	80 - 120	
Chloroform	2500	2460	98	75 - 120	
1,1,1-Trichloroethane	2500	2570	103	75 - 120	
Cyclohexane	2500	2650	106	80 - 120	
1,1-Dichloropropene	2500	2590	104	80 - 125	
Carbon tetrachloride	2500	2550	102	75 - 120	
Isobutyl alcohol	125000	123000	99	80 - 130	
Benzene	2500	2480	99	80 - 125	
1,2-Dichloroethane	2500	2450	98	70 - 120	
Trichloroethene	2500	2410	96	75 - 120	
Methylcyclohexane	2500	2630	105	80 - 120	
1,2-Dichloropropane	2500	2420	97	80 - 125	
Dibromomethane	2500	2370	95	75 - 120	
1,4-Dioxane	125000	142000	113	75 - 140	
Bromodichloromethane	2500	2350	94	80 - 120	
2-Chloroethyl vinyl ether	2500	2330	93	80 - 125	
cis-1,3-Dichloropropene	2500	2520	101	80 - 125	
4-Methyl-2-pentanone	12500	12100	97	80 - 125	
Toluene	2500	2480	99	80 - 120	
trans-1,3-Dichloropropene	2500	2420	97	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/6-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1123	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,2-Trichloroethane	2500	2270	91	80 - 125	
Tetrachloroethene	2500	2500	100	80 - 120	
1,3-Dichloropropane	2500	2370	95	80 - 125	
2-Hexanone	12500	13800	110	75 - 150	
Dibromochloromethane	2500	2440	98	80 - 125	
1,2-Dibromoethane	2500	2420	97	80 - 120	
Chlorobenzene	2500	2380	95	80 - 120	
1,1,1,2-Tetrachloroethane	2500	2370	95	80 - 120	
Ethylbenzene	2500	2400	96	80 - 125	
m&p-Xylene	5000	4840	97	80 - 125	
o-Xylene	2500	2410	96	80 - 120	
Styrene	2500	2450	98	80 - 120	
Bromoform	2500	2370	95	80 - 120	
Isopropylbenzene	2500	2390	96	80 - 120	
Bromobenzene	2500	2360	94	80 - 125	
1,1,2,2-Tetrachloroethane	2500	2390	96	80 - 125	
1,2,3-Trichloropropane	2500	2290	92	80 - 120	
n-Propylbenzene	2500	2340	94	80 - 120	
2-Chlorotoluene	2500	2360	94	80 - 125	
4-Chlorotoluene	2500	2360	95	80 - 125	
1,3,5-Trimethylbenzene	2500	2390	95	80 - 120	
tert-Butylbenzene	2500	2360	94	75 - 120	
1,2,4-Trimethylbenzene	2500	2370	95	80 - 120	
sec-Butylbenzene	2500	2410	96	80 - 120	
1,3-Dichlorobenzene	2500	2370	95	80 - 125	
4-Isopropyltoluene	2500	2320	93	75 - 120	
1,4-Dichlorobenzene	2500	2360	94	80 - 125	
1,2-Dichlorobenzene	2500	2340	94	80 - 125	
n-Butylbenzene	2500	2420	97	80 - 120	
1,2-Dibromo-3-Chloropropane	2500	2190	88	70 - 120	
1,2,4-Trichlorobenzene	2500	2300	92	80 - 120	
Hexachlorobutadiene	2500	2510	100	75 - 120	
Naphthalene	2500	2290	92	80 - 130	
1,2,3-Trichlorobenzene	2500	2340	94	80 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	93	80 - 120
Toluene-d8	95	80 - 120
Bromofluorobenzene	90	80 - 125
1,2-Dichlorobenzene-d4	86	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/7-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/02/2013 2248	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	2500	1680	67	35 - 125	
Chloromethane	2500	1900	76	65 - 120	
Vinyl chloride	2500	2330	93	80 - 130	
Bromomethane	2500	1380	55	40 - 120	
Chloroethane	2500	1120	45	40 - 120	
Trichlorofluoromethane	2500	1530	61	40 - 120	
1,1-Dichloroethene	2500	2720	109	80 - 120	
Freon TF	2500	2350	94	70 - 120	
Acetone	12500	14300	115	15 - 200	
Methyl iodide	2500	2550	102	45 - 150	
Carbon disulfide	2500	2450	98	80 - 120	
Methyl acetate	2500	2170	87	70 - 120	
Methylene Chloride	2500	2560	102	80 - 120	
trans-1,2-Dichloroethene	2500	2630	105	80 - 125	
Methyl t-butyl ether	2500	2470	99	80 - 120	
1,1-Dichloroethane	2500	2600	104	80 - 120	
Vinyl acetate	2500	3040	122	80 - 200	
2,2-Dichloropropane	2500	2640	106	80 - 120	
cis-1,2-Dichloroethene	2500	2480	99	80 - 125	
2-Butanone	12500	13900	111	60 - 170	
Bromochloromethane	2500	2280	91	80 - 130	
Tetrahydrofuran	35000	34500	98	80 - 120	
Chloroform	2500	2460	99	75 - 120	
1,1,1-Trichloroethane	2500	2560	102	75 - 120	
Cyclohexane	2500	2630	105	80 - 120	
1,1-Dichloropropene	2500	2610	104	80 - 125	
Carbon tetrachloride	2500	2530	101	75 - 120	
Isobutyl alcohol	125000	113000	90	80 - 130	
Benzene	2500	2490	100	80 - 125	
1,2-Dichloroethane	2500	2470	99	70 - 120	
Trichloroethene	2500	2410	96	75 - 120	
Methylcyclohexane	2500	2600	104	80 - 120	
1,2-Dichloropropane	2500	2400	96	80 - 125	
Dibromomethane	2500	2330	93	75 - 120	
1,4-Dioxane	125000	125000	100	75 - 140	
Bromodichloromethane	2500	2340	94	80 - 120	
2-Chloroethyl vinyl ether	2500	2310	92	80 - 125	
cis-1,3-Dichloropropene	2500	2490	100	80 - 125	
4-Methyl-2-pentanone	12500	11600	93	80 - 125	
Toluene	2500	2490	99	80 - 120	
trans-1,3-Dichloropropene	2500	2410	96	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/7-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/02/2013 2248	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,2-Trichloroethane	2500	2270	91	80 - 125	
Tetrachloroethene	2500	2460	98	80 - 120	
1,3-Dichloropropane	2500	2350	94	80 - 125	
2-Hexanone	12500	13100	105	75 - 150	
Dibromochloromethane	2500	2410	96	80 - 125	
1,2-Dibromoethane	2500	2370	95	80 - 120	
Chlorobenzene	2500	2380	95	80 - 120	
1,1,1,2-Tetrachloroethane	2500	2350	94	80 - 120	
Ethylbenzene	2500	2400	96	80 - 125	
m&p-Xylene	5000	4840	97	80 - 125	
o-Xylene	2500	2380	95	80 - 120	
Styrene	2500	2420	97	80 - 120	
Bromoform	2500	2270	91	80 - 120	
Isopropylbenzene	2500	2470	99	80 - 120	
Bromobenzene	2500	2430	97	80 - 125	
1,1,2,2-Tetrachloroethane	2500	2400	96	80 - 125	
1,2,3-Trichloropropane	2500	2320	93	80 - 120	
n-Propylbenzene	2500	2400	96	80 - 120	
2-Chlorotoluene	2500	2440	97	80 - 125	
4-Chlorotoluene	2500	2440	98	80 - 125	
1,3,5-Trimethylbenzene	2500	2480	99	80 - 120	
tert-Butylbenzene	2500	2450	98	75 - 120	
1,2,4-Trimethylbenzene	2500	2450	98	80 - 120	
sec-Butylbenzene	2500	2490	100	80 - 120	
1,3-Dichlorobenzene	2500	2400	96	80 - 125	
4-Isopropyltoluene	2500	2380	95	75 - 120	
1,4-Dichlorobenzene	2500	2400	96	80 - 125	
1,2-Dichlorobenzene	2500	2400	96	80 - 125	
n-Butylbenzene	2500	2480	99	80 - 120	
1,2-Dibromo-3-Chloropropane	2500	2190	87	70 - 120	
1,2,4-Trichlorobenzene	2500	2280	91	80 - 120	
Hexachlorobutadiene	2500	2450	98	75 - 120	
Naphthalene	2500	2210	88	80 - 130	
1,2,3-Trichlorobenzene	2500	2270	91	80 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	94	80 - 120
Toluene-d8	96	80 - 120
Bromofluorobenzene	95	80 - 125
1,2-Dichlorobenzene-d4	88	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	MB 200-50187/5	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma05.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1159	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorodifluoromethane	5.0	U	0.35	5.0
Chloromethane	5.0	U	0.39	5.0
Vinyl chloride	5.0	U	0.30	5.0
Bromomethane	5.0	U	1.2	5.0
Chloroethane	5.0	U	0.39	5.0
Trichlorofluoromethane	5.0	U	0.27	5.0
1,1-Dichloroethene	5.0	U	0.39	5.0
Freon TF	5.0	U	0.31	5.0
Acetone	5.0	U	2.1	5.0
Methyl iodide	5.0	U	0.65	5.0
Carbon disulfide	5.0	U	0.27	5.0
Methyl acetate	5.0	U	0.84	5.0
Methylene Chloride	5.0	U	0.40	5.0
trans-1,2-Dichloroethene	5.0	U	0.37	5.0
1,2-Dichloroethene, Total	5.0	U	0.35	5.0
Methyl t-butyl ether	5.0	U	0.41	5.0
1,1-Dichloroethane	5.0	U	0.34	5.0
Vinyl acetate	5.0	U	0.67	5.0
2,2-Dichloropropane	5.0	U	0.54	5.0
cis-1,2-Dichloroethene	5.0	U	0.35	5.0
2-Butanone	5.0	U	1.3	5.0
Bromochloromethane	5.0	U	0.33	5.0
Tetrahydrofuran	50	U	7.3	50
Chloroform	5.0	U	0.35	5.0
1,1,1-Trichloroethane	5.0	U	0.31	5.0
Cyclohexane	5.0	U	0.30	5.0
1,1-Dichloropropene	5.0	U	0.26	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Isobutyl alcohol	250	U	23	250
Benzene	5.0	U	0.32	5.0
1,2-Dichloroethane	5.0	U	0.39	5.0
Trichloroethene	5.0	U	0.36	5.0
Methylcyclohexane	5.0	U	0.26	5.0
1,2-Dichloropropane	5.0	U	0.33	5.0
Dibromomethane	5.0	U	0.34	5.0
1,4-Dioxane	250	U	15	250
Bromodichloromethane	5.0	U	0.36	5.0
2-Chloroethyl vinyl ether	5.0	U	0.23	5.0
cis-1,3-Dichloropropene	5.0	U	0.29	5.0
4-Methyl-2-pentanone	5.0	U	0.50	5.0
Toluene	5.0	U	0.11	5.0
trans-1,3-Dichloropropene	5.0	U	0.29	5.0
1,1,2-Trichloroethane	5.0	U	0.36	5.0
Tetrachloroethene	5.0	U	0.10	5.0
1,3-Dichloropropane	5.0	U	0.46	5.0

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	MB 200-50187/5	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma05.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1159	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Hexanone	5.0	U	0.63	5.0
Dibromochloromethane	5.0	U	0.31	5.0
1,2-Dibromoethane	5.0	U	0.41	5.0
Chlorobenzene	5.0	U	0.16	5.0
1,1,1,2-Tetrachloroethane	5.0	U	0.060	5.0
Ethylbenzene	5.0	U	0.070	5.0
m&p-Xylene	5.0	U	0.25	5.0
o-Xylene	5.0	U	0.080	5.0
Xylenes, Total	5.0	U	0.080	5.0
Styrene	5.0	U	0.12	5.0
Bromoform	5.0	U	0.32	5.0
Isopropylbenzene	5.0	U	0.34	5.0
Bromobenzene	5.0	U	0.31	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.97	5.0
1,2,3-Trichloropropane	5.0	U	0.82	5.0
n-Propylbenzene	5.0	U	0.070	5.0
2-Chlorotoluene	5.0	U	0.35	5.0
4-Chlorotoluene	5.0	U	0.25	5.0
1,3,5-Trimethylbenzene	5.0	U	0.20	5.0
tert-Butylbenzene	5.0	U	0.26	5.0
1,2,4-Trimethylbenzene	5.0	U	0.050	5.0
sec-Butylbenzene	5.0	U	0.25	5.0
1,3-Dichlorobenzene	0.158	J	0.11	5.0
4-Isopropyltoluene	5.0	U	0.090	5.0
1,4-Dichlorobenzene	5.0	U	0.22	5.0
1,2-Dichlorobenzene	5.0	U	0.10	5.0
n-Butylbenzene	5.0	U	0.29	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	0.96	5.0
1,2,4-Trichlorobenzene	0.417	J	0.32	5.0
Hexachlorobutadiene	5.0	U	0.46	5.0
Naphthalene	0.639	J	0.57	5.0
1,2,3-Trichlorobenzene	0.471	J	0.37	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	94	35 - 145
Toluene-d8	94	40 - 175
Bromofluorobenzene	96	30 - 200
1,2-Dichlorobenzene-d4	95	20 - 185

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	LCS 200-50187/3	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma03.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1059	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	50.0	38.1	76	55 - 120	
Chloromethane	50.0	39.0	78	65 - 120	
Vinyl chloride	50.0	46.3	93	75 - 120	
Bromomethane	50.0	34.2	68	60 - 120	
Chloroethane	50.0	42.4	85	75 - 120	
Trichlorofluoromethane	50.0	42.3	85	65 - 120	
1,1-Dichloroethene	50.0	48.8	98	80 - 120	
Freon TF	50.0	44.2	88	65 - 120	
Acetone	125	104	83	70 - 120	
Methyl iodide	50.0	45.4	91	55 - 125	
Carbon disulfide	50.0	45.6	91	65 - 120	
Methyl acetate	50.0	37.4	75	65 - 120	
Methylene Chloride	50.0	48.4	97	75 - 120	
trans-1,2-Dichloroethene	50.0	49.3	99	75 - 125	
Methyl t-butyl ether	50.0	47.8	96	70 - 120	
1,1-Dichloroethane	50.0	47.1	94	70 - 120	
Vinyl acetate	50.0	87.6	175	80 - 185	
2,2-Dichloropropane	50.0	46.9	94	75 - 120	
cis-1,2-Dichloroethene	50.0	48.6	97	75 - 120	
2-Butanone	125	119	95	60 - 130	
Bromochloromethane	50.0	47.1	94	75 - 120	
Tetrahydrofuran	575	575	100	75 - 120	
Chloroform	50.0	47.5	95	80 - 120	
1,1,1-Trichloroethane	50.0	46.7	93	70 - 120	
Cyclohexane	50.0	50.9	102	70 - 120	
1,1-Dichloropropene	50.0	49.0	98	75 - 120	
Carbon tetrachloride	50.0	46.2	92	70 - 120	
Isobutyl alcohol	2500	2660	107	75 - 130	
Benzene	50.0	49.0	98	75 - 125	
1,2-Dichloroethane	50.0	45.5	91	70 - 120	
Trichloroethene	50.0	47.3	95	75 - 120	
Methylcyclohexane	50.0	50.5	101	75 - 120	
1,2-Dichloropropane	50.0	47.2	94	75 - 120	
Dibromomethane	50.0	47.7	95	75 - 120	
1,4-Dioxane	2500	2730	109	75 - 120	
Bromodichloromethane	50.0	46.6	93	75 - 120	
2-Chloroethyl vinyl ether	50.0	41.5	83	55 - 120	
cis-1,3-Dichloropropene	50.0	51.7	103	80 - 120	
4-Methyl-2-pentanone	125	122	97	75 - 130	
Toluene	50.0	48.6	97	80 - 125	
trans-1,3-Dichloropropene	50.0	48.7	97	75 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	LCS 200-50187/3	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma03.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1059	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,2-Trichloroethane	50.0	47.3	95	75 - 120	
Tetrachloroethene	50.0	48.4	97	80 - 125	
1,3-Dichloropropane	50.0	48.4	97	75 - 120	
2-Hexanone	125	123	98	80 - 120	
Dibromochloromethane	50.0	48.4	97	75 - 120	
1,2-Dibromoethane	50.0	49.5	99	75 - 120	
Chlorobenzene	50.0	49.1	98	80 - 125	
1,1,1,2-Tetrachloroethane	50.0	46.8	94	75 - 120	
Ethylbenzene	50.0	49.0	98	80 - 125	
m&p-Xylene	100	97.4	97	80 - 125	
o-Xylene	50.0	48.3	97	80 - 125	
Styrene	50.0	49.1	98	80 - 125	
Bromoform	50.0	47.6	95	75 - 120	
Isopropylbenzene	50.0	46.8	94	80 - 125	
Bromobenzene	50.0	47.1	94	75 - 120	
1,1,2,2-Tetrachloroethane	50.0	47.2	94	75 - 120	
1,2,3-Trichloropropane	50.0	45.9	92	70 - 120	
n-Propylbenzene	50.0	46.6	93	80 - 125	
2-Chlorotoluene	50.0	46.8	94	80 - 125	
4-Chlorotoluene	50.0	48.1	96	80 - 125	
1,3,5-Trimethylbenzene	50.0	47.4	95	80 - 125	
tert-Butylbenzene	50.0	46.3	93	75 - 120	
1,2,4-Trimethylbenzene	50.0	47.2	94	80 - 125	
sec-Butylbenzene	50.0	47.8	96	80 - 125	
1,3-Dichlorobenzene	50.0	47.7	95	80 - 125	
4-Isopropyltoluene	50.0	46.4	93	75 - 120	
1,4-Dichlorobenzene	50.0	48.4	97	80 - 120	
1,2-Dichlorobenzene	50.0	47.6	95	80 - 125	
n-Butylbenzene	50.0	49.6	99	80 - 125	
1,2-Dibromo-3-Chloropropane	50.0	44.9	90	70 - 120	
1,2,4-Trichlorobenzene	50.0	49.8	100	80 - 125	
Hexachlorobutadiene	50.0	51.3	103	80 - 130	
Naphthalene	50.0	49.3	99	80 - 120	
1,2,3-Trichlorobenzene	50.0	50.1	100	80 - 125	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	93	35 - 145
Toluene-d8	94	40 - 175
Bromofluorobenzene	93	30 - 200
1,2-Dichlorobenzene-d4	91	20 - 185

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50113

Method: 8015B
Preparation: 3550C

Lab Sample ID:	MB 200-50113/1-A	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Client Matrix:	Solid	Prep Batch:	200-50113	Lab File ID:	F0010403.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.52 g
Analysis Date:	01/04/2013 1247	Units:	mg/Kg	Final Weight/Volume:	2000 uL
Prep Date:	12/31/2012 0939			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Diesel Range Organics [C10-C28]	6.6	U	0.98	6.6

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	86	40 - 125

Lab Control Sample - Batch: 200-50113

Method: 8015B
Preparation: 3550C

Lab Sample ID:	LCS 200-50113/2-A	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Client Matrix:	Solid	Prep Batch:	200-50113	Lab File ID:	F0010404.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.29 g
Analysis Date:	01/04/2013 1332	Units:	mg/Kg	Final Weight/Volume:	2000 uL
Prep Date:	12/31/2012 0939			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diesel Range Organics [C10-C28]	33.0	30.2	91	35 - 160	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	91	40 - 125

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50062

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 200-50062/1-A	Analysis Batch:	200-50092	Instrument ID:	METICP7
Client Matrix:	Solid	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/29/2012 0146	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	6.0	U	0.49	6.0
Arsenic	1.0	U	0.56	1.0
Beryllium	0.50	U	0.032	0.50
Cadmium	0.50	U	0.078	0.50
Chromium	1.0	U	0.11	1.0
Copper	2.5	U	0.22	2.5
Lead	1.0	U	0.44	1.0
Nickel	4.0	U	0.29	4.0
Selenium	3.5	U	0.87	3.5
Silver	1.0	U	0.13	1.0
Thallium	2.5	U	0.41	2.5
Zinc	2.0	U	0.56	2.0

Lab Control Sample - Batch: 200-50062

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCS 200-50062/2-A	Analysis Batch:	200-50092	Instrument ID:	METICP7
Client Matrix:	Solid	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/29/2012 0151	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	49.19	98	80 - 120	
Arsenic	24.0	22.81	95	80 - 120	
Beryllium	5.00	4.83	97	80 - 120	
Cadmium	25.0	22.14	89	80 - 120	
Chromium	20.0	19.06	95	80 - 120	
Copper	25.0	23.21	93	80 - 120	
Lead	22.0	20.10	91	80 - 120	
Nickel	50.0	45.69	91	80 - 120	
Selenium	25.0	22.82	91	80 - 120	
Silver	25.0	25.48	102	80 - 120	
Thallium	25.0	22.56	90	80 - 120	
Zinc	50.0	45.87	92	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 200-50058/11-A	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.30 g
Analysis Date:	12/28/2012 1245	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Hg	0.00450	J	0.0022	0.033

Lab Control Sample - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCS 200-50058/12-A	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.30 g
Analysis Date:	12/28/2012 1247	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hg	0.167	0.160	96	80 - 120	

Matrix Spike - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	200-14287-3	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.33 g
Analysis Date:	12/28/2012 1254	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Hg	0.063	0.180	0.221	88	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Duplicate - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	200-14287-3	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.36 g
Analysis Date:	12/28/2012 1252	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Hg	0.063	0.0696	9	20	

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

FAL (copy)

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: Sara F	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone: 802 862 1980	E-Mail:		Page:
Company: CARDNO ATC				Job #:
Address: 171 Commerce St	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495				
Phone: 802 862 1980	PO #:			
Email: Harland.Miller@Cardno.com	WO #:			
Project Name: St. J Armory	Project #: 63.35078.0013			
Site: St. Johnsbury VT	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TPH - 8015B	Mercury - 7471B	Full Scan Metals - 6010C	VOC - 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
Pit Dram 1 - TPH	12/17/12	1112	G	S			X					S-01
Pit Dram 2 - TPH	12/17/12	1112	G	S			X					S-02
Pit Dram 1 - Mercury	12/17/12	1119	G	S				X				S-03
Pit Dram 2 - Mercury	12/17/12	1119	G	S				X				S-04
Pit Dram 1 - Metals	12/17/12	1126	G	S					X			S-05
Pit Dram 2 - Metals	12/17/12	1126	G	S					X			S-06
Pit Dram 1 - VOCs	12/18/12	1100	G	S						X		~~S-07~~ S-07
Pit Dram 2 - VOCs	12/17/12	1101	G	S						X		S-08

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time: 12/19/12 1	Company: Cardno	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

02/05/2013

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: Sara G	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone: 802 862 1980	E-Mail:		Page:
Company: CARDNO ATC				Job #:
Address: 171 Commerce St	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495	PO #:			
Phone: 802 862 1980	WO #:			
Email: Harland.Miller@Cardno.com	Project #: 63.35078-0013			
Project Name: St. J Armory	SSOW#:			
Site: St. Johnsbury VT				

Analysis Requested

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TPH - 8015B	Mercury - 7471B	Full Scan Metals - 6010C	VOC - 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
Pit Drum 1 - TPH	12/17/12	1112	G	S			X					See attached
Pit Drum 2 - TPH	12/17/12	1112	G	S			X					
Pit Drum 1 - Mercury	12/17/12	1119	G	S				X				
Pit Drum 2 - Mercury	12/17/12	1119	G	S				X				
Pit Drum 1 - Metals	12/17/12	1126	G	S					X			
Pit Drum 2 - Metals	12/17/12	1126	G	S					X			
Pit Drum 1 - VOCs	12/18/12	1100	G	S						X		
Pit Drum 2 - VOCs	12/18/12	1101	G	S						X		

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time: 12/19/12 1	Company: Cardno	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Page 56 of 57

3/6/2013

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

171 Commerce Street · PO Box 1486
Williston, VT 05495
Telephone 802-862-1980
Fax 802-862-1405
www.atcgroupservices.com

March 3, 2017

Mr. Joe Kasperzak
Assistant Town Manager
Town of St. Johnsbury
51 Depot Square, Suite 3
St. Johnsbury, VT 05819

Transmitted via electronic mail to: jkasprzak@stjvt.com

RE: PCB Building Material Survey
St. Johnsbury Armory Building
St. Johnsbury, Vermont
ATC Project # 280BS00783

Dear Joe,

The following report details the PCB in building material sampling, PCB wipe sampling, and airborne PCB concentration sampling conducted by ATC Group Services LLC (ATC) at the St. Johnsbury Armory located in St. Johnsbury, Vermont.

ATC was retained by the City of St. Johnsbury (ST. J) to perform a survey for the presence of polychlorinated biphenyls (PCBs) in suspect building materials associated with the building. The survey was conducted as a supplement to a previous PCB screening survey conducted by ATC for the Northeastern Vermont Development Association (NVDA) dated November 28, 2012. The objective of that and this current survey is evaluate for the presence of PCB-containing materials (i.e. various caulking, paint and glazing compound materials) that would require special management as part of the building renovation project.

The facility is constructed primarily of brick, with a concrete foundation. The windows are constructed of wood panel frames. The previous NVDA report indicated the presence of PCB's in various paint and caulking materials, some of which exceeding the EPA action level of 50 ppm.

Sampling was performed in a phased manner during between November 21, 2016 and December 21, 2016, as summarized below:

Airborne PCB Concentration Sampling – November 21, 2016

Airborne PCB Concentration samples were collected from two (2) indoor areas and one (1) exterior area of the facility prior to the disturbance of building materials. Additionally one (1) field blank sample was collected for quality control purposes. Indoor samples were collected from the basement (area of highest previously identified PCB containing material) and the first floor (area identified as next most likely to be impacted by PCB containing materials). Samples were submitted to Con-test Analytical Laboratory in East Longmeadow, MA for laboratory analysis via EPA To-10A/EPA 680 (Homolog) analysis.

The following Table 1 details the laboratory results of Airborne PCB Concentration samples:

Table 1: Airborne PCB Concentration Results- November 21, 2016:

Sample Number	Location Description	Total PCB Results* ug/m^3
PCBV-1	Exterior	0.0068
PCBV-2	First Floor- Main Drill Hall	0.12
PCBV-3	Basement- Center large open area	0.033
PCBV-4	Field Blank	0.0086 ug

*Total= Total of all Homologs detected

Total Airborne PCB concentrations can be compared to the US EPA's Regional Screen Level (RSL) for Composite Worker Ambient Air Table (May 2016 version). The 2016 RSL provides Carcinogenic Target Risk Values for High Risk, Low Risk and Lowest Risk comparisons. These values would be selected based on the population utilizing the building, how long that population was potentially in the building and various other risk factors for exposure. Since this building is currently unoccupied the lowest risk value was used for comparison purposes.

The 2016 EPA RSL for Lowest Risk Value is 0.61 ug/m^3. Sample results for the armory building show that the indoor airborne concentrations for all samples were below the 2016 RSL lowest risk value.

PCB Bulk Sampling – November 22, 2016

Additional PCB bulk samples of suspect materials were collected of previously sampled suspect PCB containing materials. The initial NVDA survey consisted of two (2) samples of each homogeneous area. Recent EPA guidance has illustrated the need for a minimum of three (3) sample to be collected for each material. ATC collected a total of nine (9) bulk samples of suspect materials for laboratory analysis to meet the EPA guidelines. Samples were submitted to Con-test Analytical Laboratory in East Longmeadow, MA for laboratory analysis via EPA 3540C/8082 (full soxhlet extraction) analysis.

The EPA regulatory limit ("not authorized for use" under the Toxic Substances Control Act of 1976 [TSCA]) for PCBs in building materials is 50 parts per million (ppm). The following Table 2 summarizes the PCB Bulk sampling results for the NVDA report and the subsequent ATC sampling event on November 21, 2017:

Table 2: PCB Bulk Sample Results:

Sample Number	Description	Highest 2012 concentration mg/kg (ppm)	2017 Sample Result mg/kg (ppm)
PCB-2C	Exterior Window Caulk- newer	1.5	ND
PCB-3C	Exterior Window Glaze	ND	0.87
PCB-4C	Exterior- Window Caulk- old	26	0.81
PCB-5C	Exterior Tar Caulking	ND	ND
PCB-6C	Silver Flashing	ND	ND
PCB-9C	Black Rood Caulking	ND	ND
PCB-16D	**Grey Floor Paint – Basement**	**5,700**	**20,000**
PCB-19C	White Wall Paint	7.4	9.0
PCB-20C	**Blue Floor Paint- Basement**	**44**	**67.0**

ND= None Detect **Bold=** Materials in excess of 50 mg/Kg

The combined sample results mostly confirm previous sampling results with the exceptions of the blue basement floor paint which is now identified as exceeding the EPA regulatory threshold along with the Grey basement floor paint. The Grey and Blue basement color paint are considered to be prohibited use products and as such classified as Bulk Product Waste under TSCA and its implementing regulation at 40 CFR Part 761.

Several of the materials were found to contain levels of PCB's in detectable levels but below the EPA regulatory threshold. These materials will either be classified as PCB remediation waste or PCB Exempt material. These materials include the Exterior window caulking (two types) and the white interior wall paint.

PCB excluded waste is any material installed prior to 1984 that has been showed to have PCB concentrations below 50 ppm and not impacted by other PCB containing materials. It is likely that the exterior window caulking would meet this definition as no other PCB containing materials are located in proximity to the material and the windows appear to have been installed prior to 1984. Excluded Wastes are not required to be removed by TSCA regulations, however, can still present a potential exposure risk.

PCB remediation waste is any material with a PCB concentration great than 1 ppm and less than 50 ppm that has been directly impacted by another material with a concentration great than 50. These materials must be managed according to EPA directive or removed according to applicable regulations.

PCB Surface Wipe Sampling – November 22, 2016

ATC conducted PCB wipe sampling of the interior floor surfaces throughout the facility to determine if PCBs have impacted or settled on the interior surfaces within the facility.

ATC collected 11 wipe samples and 1 Blank from various floor surfaces throughout the facility. Wipe samples were submitted to Con-test Analytical Laboratory in East Longmeadow, MA for laboratory analysis via EPA 3540C/8082 (full soxhlet extraction) analysis.

The following table 3 summarizes the PCB Interior PCB Wipe sampling results:

Table 3: PCB Wipe Sample Results- November 22, 2017:

Sample Number	Sample Location	Results ug/100 cm^2
W-01	Field Blank	ND
****W-02**	**Room 25- at room 37**	**4,500**
****W-03**	**Room 26- East Center**	**23**
W-04	**Room 11- Top of Stairs**	**110**
W-05	**Room 16- Center**	**3.7**
W-06	**Room 11 – at door to room 17**	**5.2**
W-07	**Room 17- 10' from door to room 11**	**2.0**
W-08	Room 14- North on path to room 13	0.89
W-09	Room 17- Southwest	0.22
W-10	**Room 3- Top step of stairs**	**9.4**
W-11	Room 3- at door to room 9	0.81
W-12	Room 5- at door to room 3	0.34

ND – Below noted laboratory reporting limits (RL) **-PCB Painted surface **Bold**= materials in excess of 1 ug/cm^2

Results of the above wipe samples indicate that all 11 wipe samples collected were found to contain detectable levels of PCBs. These levels are generally highest at in the area of PCB containing paint and generally reduce as foot traffic would move from this area to other parts of the facility. This pattern is typical of contaminants being moved via foot traffic carrying the material throughout the building.

Please note that the wipe testing is designed for non-porous surfaces such as metal and ceramic tile but it is a useful tool for preliminary evaluations. The interior wipe sample results (levels above the common post abatement standard of 1.0 ug/100 cm^2) indicate that PCBs are present in significant quantities in these areas.

PCB Basement Concrete Coring Sampling – November 27, 2016

ATC conducted concrete coring sampling of the interior floor surfaces throughout the basement slab of the facility to determine if PCBs in the painted material have impacted the underlying substrate.

ATC collected a total of 36 concrete core samples from various areas of the basement areas identified as having PCB containing paint above the EPA regulatory threshold of 50 ppm. 28 core samples, including one (1) duplicate sample collected for quality control purposes, were collected from seven (7) locations with in the basement area at a variety of depths to identify how deep, if any, PCB's have impacted the substrate. Samples were collected from 0.0 to 0.25", 0.25 to 0.5", 0.5 to 1.0" and 1.0 to 1.5" depths. In seven (7) additional locations samples were collected from the 0.0 to 0.5" depth interval only. This was done to determine if patterns were present across the painted portion of the slab while limiting sampling analysis costs.

Samples were collected in general conformance with EPA Region 1 *Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs) Revision 4,* dated May 5, 2011. Core samples were submitted to Con-test Analytical Laboratory in East Longmeadow, MA for laboratory analysis via EPA 3540C/8082 (full soxhlet extraction) analysis.

The following table 4 summarizes the concrete core sample results:

Table 4: PCB Concrete Core Sample Results- November 27, 2017:

Sample Location	Results mg/kg (ppm) 0.0 to 0.25" depth	Results mg/kg (ppm) 0.25 to 0.50" depth	Results mg/kg (ppm) 0.50 to 1.0" depth	Results mg/kg (ppm) 1.0 to 1.5" depth	Results mg/kg (ppm) 0.0 to 0.50" depth
01- Room 37	1,040	650	226	310	NS
02- Room 23	82	45	3.3	2.5	NS
03- Room 26	20.3	3.5	3.2	0.12	NS
04- Room 28	26	20.6	4.7	0.75	NS
05- Room 27	41	6.3	2.59	1.99 (1.3)	NS
06- Room Hall between Rooms 30 and 34	14.8	3.89	0.40	0.87	NS
07- Room 31	106	58	36	41	NS
08- Room 36	NS	NS	NS	NS	180
09- Room 28	NS	NS	NS	NS	1.6
10- Room 27	NS	NS	NS	NS	7.0
11- Room 26	NS	NS	NS	NS	4.3
12- Room 25	NS	NS	NS	NS	14
13- Room Hall Between Rooms 24 and 25	NS	NS	NS	NS	16
14- Room 27	NS	NS	NS	NS	1.9

NS- No Sample collected for interval depth (#) - Duplicate sample for QA/QC purposes

All but 4 of the sample results of the above concrete cores samples indicate that the concrete slab of the painted portion of the basement has been impacted to a depth of at least 1.5" by PCB contamination at levels above the 1 mg/Kg Remediation Waste standard.

These results indicated that the painted portion of the concrete slab of the basement area would be considered a PCB remediation waste material and subject to EPA regulatory authority to a depth of at least 1.5".

Additionally, ATC advanced four (4) cores from the slab surface to the subsurface of the slab to determine approximate slab thicknesses. The concrete slab was observed to range between 2.5" to 5" in thickness.

Data Usability

The laboratories utilized did not report any quality control/quality assurance issues with their analyses which would affect the usability of the data for this project.

Recommendations:

Identified PCB Bulk Product Waste (basement grey and blue floor paint) must be removed in accordance with TSCA and disposed off-Site at a landfill that can accept PCB Bulk Product Waste. TSCA requires that all PCB Bulk Product Waste be removed. TSCA does not prescribe a schedule for this removal. This can be accomplished in one of the two following manners:

1) ATC recommended approach - Develop a Performance Based abatement plan to remove identified PCB Bulk Product Waste and PCB Remediation Waste that might be present; incorporate PCB abatement requirements into project Technical Specifications; and implement abatement plan, with oversight by a qualified environmental professional.
    a. Based upon current data, ATC envisions that a Performance-Based approach would include the removal of the entirety of the painted basement slab as PCB Bulk Product. Cleaning or removal of impacted flooring materials from the remainder of the facility as PCB remediation waste. Dispose of all materials at a landfill that is permitted to accept PCB Bulk and Remediation Product wastes. Dispose of all containment, PPE, filters and tools that cannot be decontaminated as PCB waste with PCB concentrations > 50 ppm.

2) Develop a Risk Based Remediation plan which would remove all PCB Bulk Product Waste and manage all PCB Remediation Waste (identified as materials impacted by Bulk Product waste in concentrations greater than 1 ppm) in place. This would require management and removal be conducted in accordance with 40 CFR 761.61(b) following approval from the EPA.

As part of the PCB remediation design and implementation procedure for either option additional sampling will be required. These items could be include but are not limited to painted surfaces and sub slab soil sampling.

Limitations

Our professional services have been performed and our findings obtained and prepared in accordance with customary principles and practices in the field of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Environmental evaluations are limited in the sense that conclusions are developed and information obtained from limited research and secondary sources. Except as set forth in this report, ATC has not made independent investigations as to the accuracy or completeness of the information derived from the secondary sources and personal interviews and has presumed that such information was accurate and complete. This report is intended for the sole use of the Town of St. Johnsbury. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings or conclusions is at risk of said user.

Additional information can be found in the attached **Appendix A,** sample location diagrams, and **Appendix B** contains the laboratory analytical results.

Thank you for selecting ATC for your environmental management needs. If you have any questions, please do not hesitate to call us at (802) 862-1980.

Sincerely,

ATC Group Services LLC.





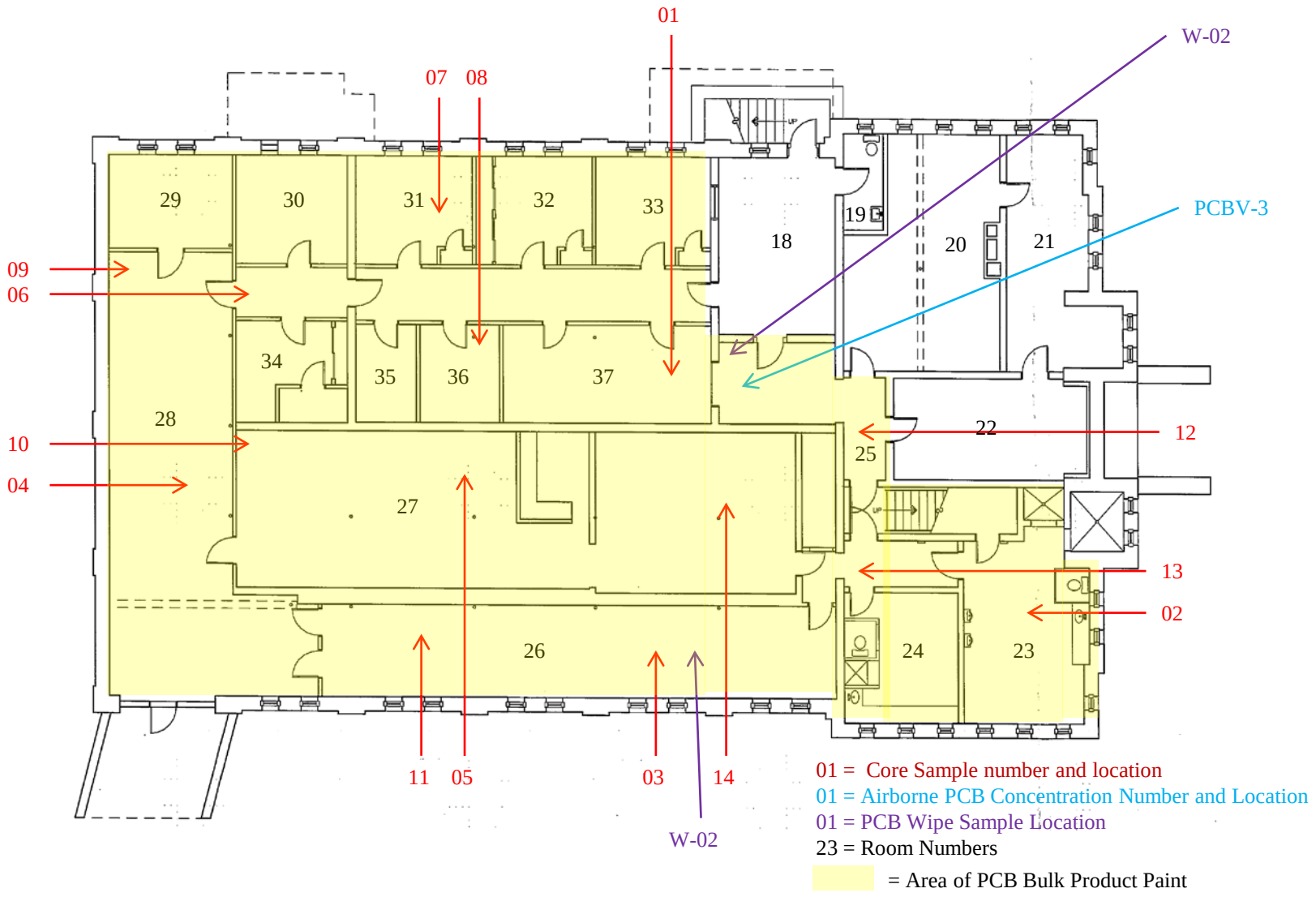
Jesse Stratton
Project Manager
for ATC Group Services LLC
Direct Line +1 802-862-1980
Email: jese.stratton@atcassociates.com

Thomas J. Broido
Principal
for ATC Group Services LLC
Direct Line +1 802-862-1980
Email: tom.broido@atcassociates.com

S:\Projects - BST\R-T\St. Johnsbury, Town of\280BS00783 Armory PCB Sampling\280BS00783 St. J Armory PCB report.docx

Appendix A

Sample Location Diagrams



Sample Location Diagram

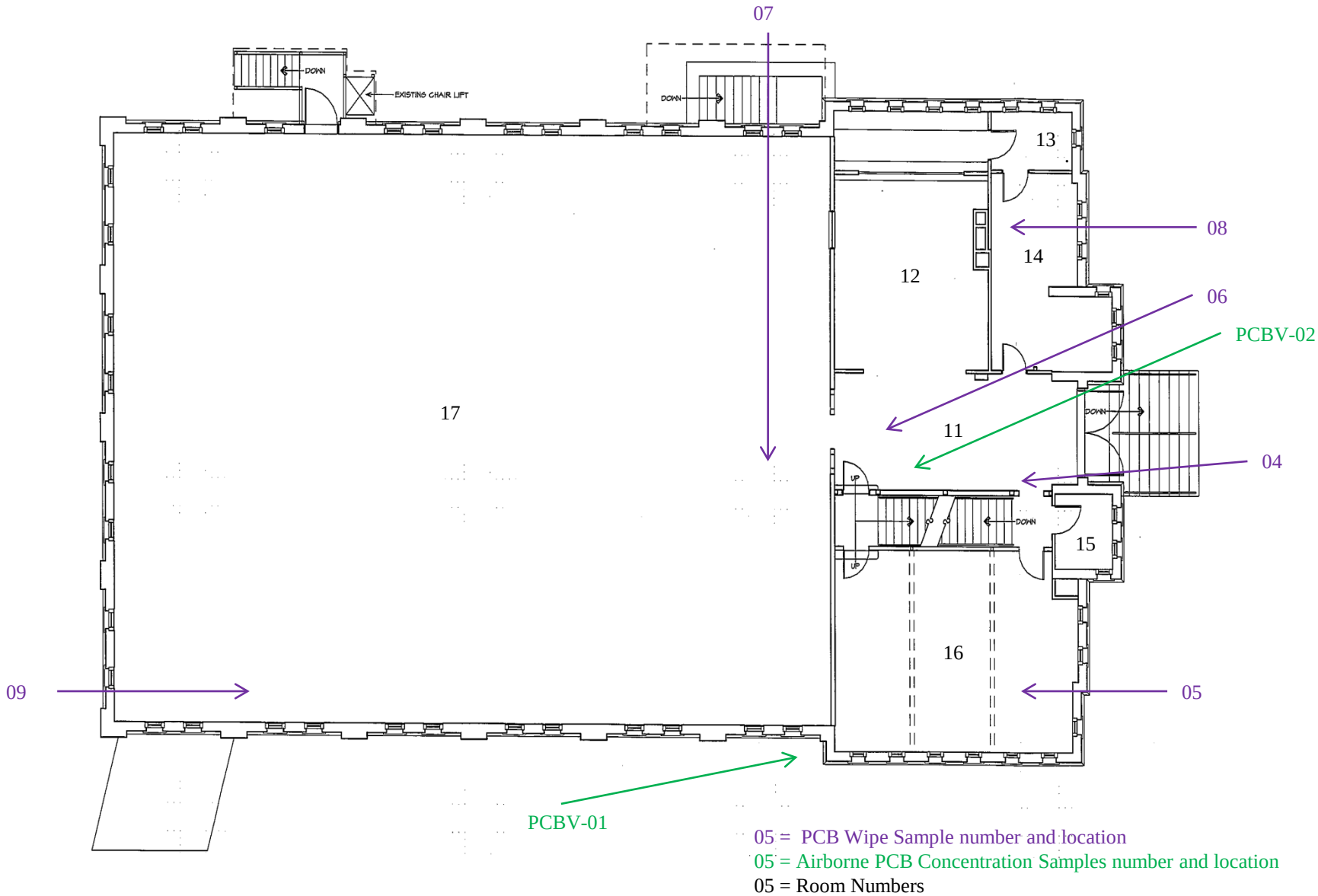
Address: St. Johnsbury Armory- Basement
1249 Main Street
St. Johnsbury, Vermont

Project Number: 280BS00783

171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

Source: Field Notes

SCALE: Not to scale



Sample Location Diagram

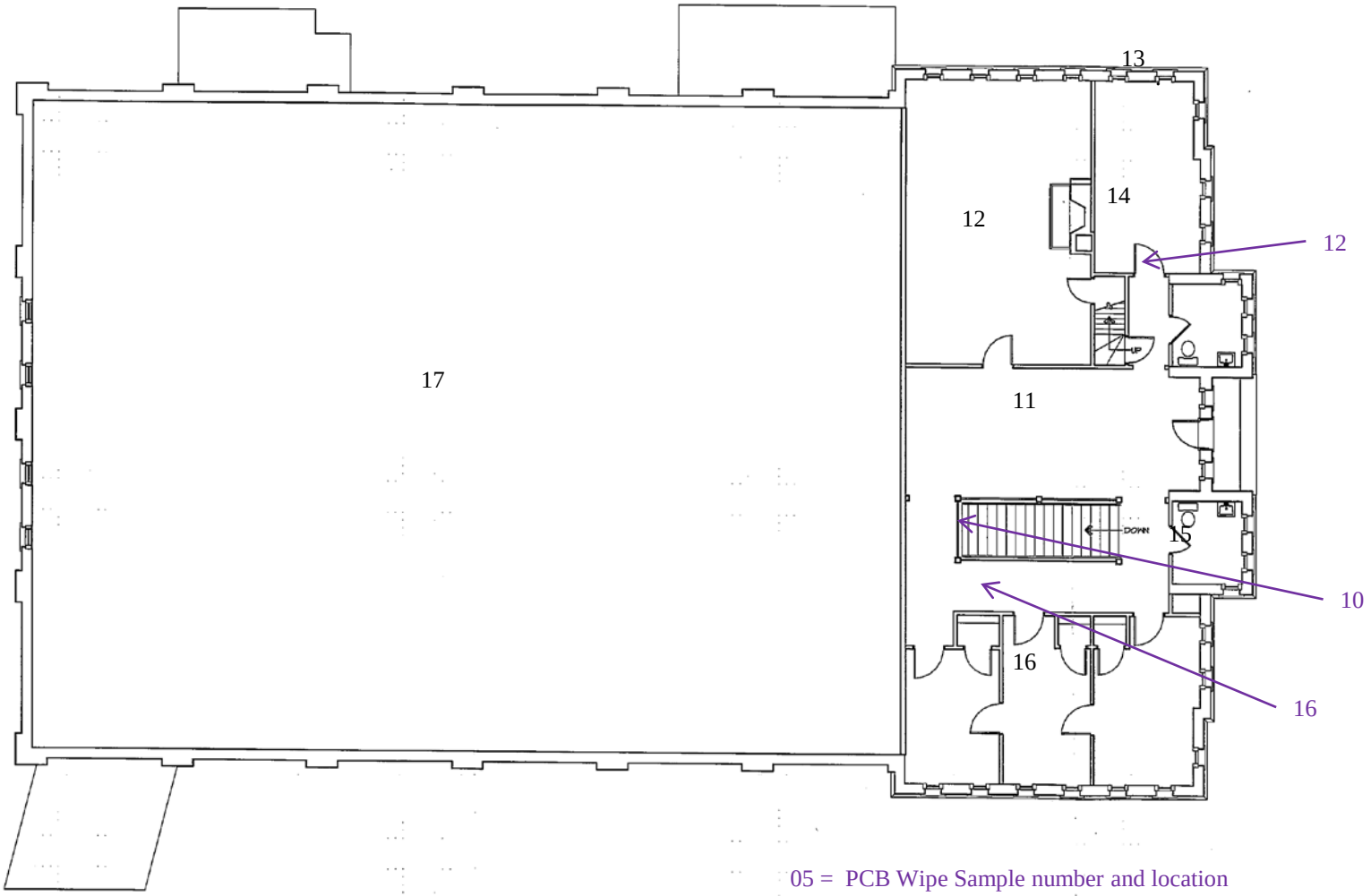
Address: St. Johnsbury Armory- 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 280BS00783

171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

Source: Field Notes

SCALE: Not to scale



05 = PCB Wipe Sample number and location
05 = Room Numbers

Sample Location Diagram

Address: St. Johnsbury Armory- 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 280BS00783

171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

Source: Field Notes

SCALE: Not to scale

Appendix B

Laboratory Hardcopy Results

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 5, 2016

Jesse Stratton
ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495

Project Location: 1247 Main St., St. Johnsbury, VT
Client Job Number:
Project Number: 280BS00783
Laboratory Work Order Number: 16K1324

Enclosed are results of analyses for samples received by the laboratory on November 23, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

Sample Preparation Information 9

QC Data 10

PCB Homologues by GC/MS with Soxhlet Extraction 10

B164275 10

Flag/Qualifier Summary 11

Certifications 12

Chain of Custody/Sample Receipt 13

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495
ATTN: Jesse Stratton

REPORT DATE: 12/5/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 280BS00783

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16K1324

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 1247 Main St., St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PCBV-1: Exterior	16K1324-01	Ambient Air		TO-10A/EPA 680 Modified	
PCBV-2: 1st Floor	16K1324-02	Indoor air		TO-10A/EPA 680 Modified	
PCBV-3: Basement	16K1324-03	Indoor air		TO-10A/EPA 680 Modified	
PCBV-4: Field Blank	16K1324-04	Field Blank		TO-10A/EPA 680 Modified	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 12/5/16 - Project location updated per COC. Sample matrix types updated per chain of custody.

For method 680 PCB Homologs, Cl-10 is not reported or included in total PCB calculation due to the addition of this compound during initial preparation.

TO-10A/EPA 680 Modified

Qualifications:

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Octachlorobiphenyls

B164275-BS1, B164275-BSD1

V-20

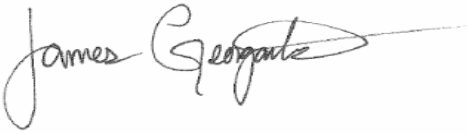
Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Octachlorobiphenyls

16K1324-01[PCBV-1: Exterior], 16K1324-02[PCBV-2: 1st Floor], 16K1324-03[PCBV-3: Basement], 16K1324-04[PCBV-4: Field Blank], B164275-BLK1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



James M. Georgantas
Project Management Supervisor

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 1247 Main St., St. Johnsbury, VT
Date Received: 11/23/2016
Field Sample #: PCBV-1: Exterior
Sample ID: 16K1324-01
Sample Matrix: Ambient Air
Sampled: 11/21/2016 17:00

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: 971.4

Work Order: 16K1324

TO-10A/EPA 680 Modified

	Total µg			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Monochlorobiphenyls	ND	0.0010		ND	0.001	1	11/30/16 6:33	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.001	1	11/30/16 6:33	CJM
Trichlorobiphenyls	ND	0.0010		ND	0.001	1	11/30/16 6:33	CJM
Tetrachlorobiphenyls	ND	0.0020		ND	0.0021	1	11/30/16 6:33	CJM
Pentachlorobiphenyls	ND	0.0020		ND	0.0021	1	11/30/16 6:33	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.0021	1	11/30/16 6:33	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.0031	1	11/30/16 6:33	CJM
Octachlorobiphenyls	ND	0.0030	V-20	ND	0.0031	1	11/30/16 6:33	CJM
Nonachlorobiphenyls	0.0066	0.0050		0.0068	0.0051	1	11/30/16 6:33	CJM
Total Polychlorinated biphenyls	0.0066			0.0068		1	11/30/16 6:33	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	100	50-125	11/30/16 6:33

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 1247 Main St., St. Johnsbury, VT
Date Received: 11/23/2016
Field Sample #: PCBV-2: 1st Floor
Sample ID: 16K1324-02
Sample Matrix: Indoor air
Sampled: 11/21/2016 16:58

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: 958.5

Work Order: 16K1324

TO-10A/EPA 680 Modified

	Total µg			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Monochlorobiphenyls	ND	0.0010		ND	0.001	1	11/30/16 7:11	CJM
Dichlorobiphenyls	0.0050	0.0010		0.0052	0.001	1	11/30/16 7:11	CJM
Trichlorobiphenyls	0.010	0.0010		0.010	0.001	1	11/30/16 7:11	CJM
Tetrachlorobiphenyls	0.041	0.0020		0.042	0.0021	1	11/30/16 7:11	CJM
Pentachlorobiphenyls	0.050	0.0020		0.052	0.0021	1	11/30/16 7:11	CJM
Hexachlorobiphenyls	0.0048	0.0020		0.0051	0.0021	1	11/30/16 7:11	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.0031	1	11/30/16 7:11	CJM
Octachlorobiphenyls	ND	0.0030	V-20	ND	0.0031	1	11/30/16 7:11	CJM
Nonachlorobiphenyls	0.0084	0.0050		0.0087	0.0052	1	11/30/16 7:11	CJM
Total Polychlorinated biphenyls	0.12			0.12		1	11/30/16 7:11	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	106	50-125	11/30/16 7:11

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 1247 Main St., St. Johnsbury, VT
Date Received: 11/23/2016
Field Sample #: PCBV-3: Basement
Sample ID: 16K1324-03
Sample Matrix: Indoor air
Sampled: 11/21/2016 17:00

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: 960.3

Work Order: 16K1324

TO-10A/EPA 680 Modified

Analyte	Total µg Results	Total µg RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010		ND	0.001	1	11/30/16 7:48	CJM
Dichlorobiphenyls	0.0025	0.0010		0.0026	0.001	1	11/30/16 7:48	CJM
Trichlorobiphenyls	0.0018	0.0010		0.0019	0.001	1	11/30/16 7:48	CJM
Tetrachlorobiphenyls	0.011	0.0020		0.012	0.0021	1	11/30/16 7:48	CJM
Pentachlorobiphenyls	0.0069	0.0020		0.0072	0.0021	1	11/30/16 7:48	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.0021	1	11/30/16 7:48	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.0031	1	11/30/16 7:48	CJM
Octachlorobiphenyls	ND	0.0030	V-20	ND	0.0031	1	11/30/16 7:48	CJM
Nonachlorobiphenyls	0.0092	0.0050		0.0096	0.0052	1	11/30/16 7:48	CJM
Total Polychlorinated biphenyls	0.032			0.033		1	11/30/16 7:48	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	107	50-125	11/30/16 7:48

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 1247 Main St., St. Johnsbury, VT
Date Received: 11/23/2016
Field Sample #: PCBV-4: Field Blank
Sample ID: 16K1324-04
Sample Matrix: Field Blank
Sampled: 11/21/2016 17:05

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: -

Work Order: 16K1324

TO-10A/EPA 680 Modified

Analyte	Total µg Results	RL	Flag/Qual	ug/m3 Results	RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010		ND		1	11/30/16 8:26	CJM
Dichlorobiphenyls	ND	0.0010		ND		1	11/30/16 8:26	CJM
Trichlorobiphenyls	ND	0.0010		ND		1	11/30/16 8:26	CJM
Tetrachlorobiphenyls	ND	0.0020		ND		1	11/30/16 8:26	CJM
Pentachlorobiphenyls	ND	0.0020		ND		1	11/30/16 8:26	CJM
Hexachlorobiphenyls	ND	0.0020		ND		1	11/30/16 8:26	CJM
Heptachlorobiphenyls	ND	0.0030		ND		1	11/30/16 8:26	CJM
Octachlorobiphenyls	ND	0.0030	V-20	ND		1	11/30/16 8:26	CJM
Nonachlorobiphenyls	0.0086	0.0050				1	11/30/16 8:26	CJM
Total Polychlorinated biphenyls	0.0086					1	11/30/16 8:26	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	95.7	50-125	11/30/16 8:26

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3540C-TO-10A/EPA 680 Modified

Lab Number [Field ID]	Batch	Initial [Cartridge]	Final [mL]	Date
16K1324-01 [PCBV-1: Exterior]	B164275	1.00	1.00	11/28/16
16K1324-02 [PCBV-2: 1st Floor]	B164275	1.00	1.00	11/28/16
16K1324-03 [PCBV-3: Basement]	B164275	1.00	1.00	11/28/16
16K1324-04 [PCBV-4: Field Blank]	B164275	1.00	1.00	11/28/16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

PCB Homologues by GC/MS with Soxhlet Extraction - Quality Control

Analyte	Total µg Results	Total µg RL	ug/m3 Results	ug/m3 RL	Spike Level Total µg	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B164275 - SW-846 3540C											
Blank (B164275-BLK1)					Prepared: 11/28/16 Analyzed: 11/30/16						
Monochlorobiphenyls	ND	0.0010									
Dichlorobiphenyls	ND	0.0010									
Trichlorobiphenyls	ND	0.0010									
Tetrachlorobiphenyls	ND	0.0020									
Pentachlorobiphenyls	ND	0.0020									
Hexachlorobiphenyls	ND	0.0020									
Heptachlorobiphenyls	ND	0.0030									
Octachlorobiphenyls	ND	0.0030									V-20
Nonachlorobiphenyls	ND	0.0050									
Decachlorobiphenyl	ND	0.0050									
Total Polychlorinated biphenyls	0.0										
Surrogate: Tetrachloro-m-xylene	*0.199*				*0.200*		*99.3*	*50-125*			
LCS (B164275-BS1)					Prepared: 11/28/16 Analyzed: 11/30/16						
Monochlorobiphenyls	0.21	0.0010			0.200		105	40-140			
Dichlorobiphenyls	0.20	0.0010			0.200		98.4	40-140			
Trichlorobiphenyls	0.19	0.0010			0.200		97.3	40-140			
Tetrachlorobiphenyls	0.43	0.0020			0.400		106	40-140			
Pentachlorobiphenyls	0.48	0.0020			0.400		120	40-140			
Hexachlorobiphenyls	0.48	0.0020			0.400		120	40-140			
Heptachlorobiphenyls	0.72	0.0030			0.600		121	40-140			
Octachlorobiphenyls	0.76	0.0030			0.600		126	40-140			V-06
Nonachlorobiphenyls	1.1	0.0050			1.00		107	40-140			
Decachlorobiphenyl	0.90	0.0050			1.00		90.2	40-140			
Surrogate: Tetrachloro-m-xylene	*0.226*				*0.200*		*113*	*50-125*			
LCS Dup (B164275-BSD1)					Prepared: 11/28/16 Analyzed: 11/30/16						
Monochlorobiphenyls	0.20	0.0010			0.200		101	40-140	3.84	50	
Dichlorobiphenyls	0.20	0.0010			0.200		97.5	40-140	0.895	50	
Trichlorobiphenyls	0.20	0.0010			0.200		98.6	40-140	1.31	50	
Tetrachlorobiphenyls	0.43	0.0020			0.400		107	40-140	0.869	50	
Pentachlorobiphenyls	0.50	0.0020			0.400		124	40-140	3.43	50	
Hexachlorobiphenyls	0.48	0.0020			0.400		119	40-140	0.565	50	
Heptachlorobiphenyls	0.72	0.0030			0.600		119	40-140	0.907	50	
Octachlorobiphenyls	0.75	0.0030			0.600		124	40-140	1.18	50	V-06
Nonachlorobiphenyls	1.0	0.0050			1.00		104	40-140	2.75	50	
Decachlorobiphenyl	0.85	0.0050			1.00		84.9	40-140	6.13	50	
Surrogate: Tetrachloro-m-xylene	*0.208*				*0.200*		*104*	*50-125*			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
TO-10A/EPA 680 Modified in Air	
Total Polychlorinated biphenyls	AIHA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

16K1324

CHAIN OF CUSTODY RECORD (AIR)

Company Name:	ATC Group Services
Address:	171 Commerce St. Williston, VT
Phone:	802-862-1980
Project Name:	StJ Armory PCB Sampling
Project Location:	1247 Main St. St Johnsbury, VT
Project Number:	280BS00783
Project Manager:	Jesse Stratton
Con-Test Bid:	
Invoice Recipient:	
Sampled By:	Devin Porter

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Other:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: devin.porter@atcassoc.com
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	TO-10A / EPA 680 - PCBs				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records	
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☑ L/min	Code	☑ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply	For summa canister and flow controller information please refer to Con-Test's Air Media Agreement
		11:21:16													Summa Can ID	Flow Controller ID
01	PCBV-1 : Exterior	0908	1700	472	2.058	Amb	971.4	✓								
02	PCBV-2 : 1st Floor	0910	1658	468	2.048	IA	958.5	✓								
03	PCBV-3 : Basement	0912	1700	468	2.052	IA	960.3	✓								
04	PCBV-4: Field Blank	~~1705~~ 1705	1705	—	—	BL	—	✓								

Comments:
Tracking #: 7777 5021 5870

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature)	Date/Time: 11.22.16 1300
Received by: (signature) 2.5	Date/Time: 11/23/16 1036
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

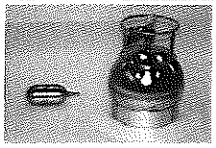
Special Requirements
☐ MA MCP Required
☐ CT RCP Required
☐ Enhanced Data Package Required

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents



www.contestlabs.com

con-test® ANALYTICAL LABORATORY

39 Spruce St.
East Longmeadow, MA.
01028
P: 413-525-2332
F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME ATC Group Services RECEIVED BY: JM DATE: 11/23/16

1) Was the chain(s) of custody relinquished and signed? Yes ✓ No ✓ JM

2) Does the chain agree with the samples? Yes ✗ No ✓
If not, explain: Recieved 2 samples not on COC

3) Are all the samples in good condition? Yes ✓ No
If not, explain:

4) Are there any samples "On Hold"? Yes ✓ No Stored where:

5) Are there any RUSH or SHORT HOLDING TIME samples? Yes No ✓
Who was notified Date Time

6) Location where samples are stored:

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature:

7) Number of cans Individually Certified or Batch Certified? N/A

Containers received at Con-Test

		# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)			
Tedlar Bags			
TO-17 Tubes			
Regulators			
Restrictors			
Hg/Hopcalite Tube (NIOSH 6009)			
(TO-4A/ TO-10A/TO-13) PUFs		6	Low Volume
PCB Florisil Tubes (NIOSH 5503)			
Air cassette			
PM 2.5/PM 10			
TO-11A Cartridges			
Other			

Unused Summas/PUF Media:

Unused Regulators:

1) Was all media (used & unused) checked into the WASP? N/A

2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet? N/A

Laboratory Comments: 111716- 01,02,03,04,05,06

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The coolers'/boxes' custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) Samples are received within Holding Time.	T	
10) Sample containers have legible labels.	T	
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T	
12) Sample collection date/times are provided.	T	
13) Appropriate sample/media containers are used.	T	
14) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	N/A	

Who notified of False statements? **Date/Time:**

Doc #278 Rev. 5 October 2014 **Log-In Technician Initials:** JM **Date/Time:** 11/23/16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

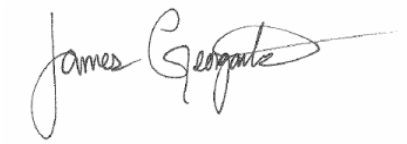
December 9, 2016

Jesse Stratton
ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495

Project Location: St Johnsbury Armory
Client Job Number:
Project Number: 280BS00783
Laboratory Work Order Number: 16K1272

Enclosed are results of analyses for samples received by the laboratory on November 23, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

16K1272-01 5

16K1272-02 6

16K1272-03 7

16K1272-04 8

16K1272-05 9

16K1272-06 10

16K1272-07 11

16K1272-08 12

16K1272-09 13

Sample Preparation Information 14

QC Data 15

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 15

B164222 15

B165055 16

Dual Column RPD Report 17

Flag/Qualifier Summary 25

Certifications 26

Chain of Custody/Sample Receipt 27

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495
ATTN: Jesse Stratton

REPORT DATE: 12/9/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 280BS00783

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16K1272

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: St Johnsbury Armory

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PCB-2C	16K1272-01	Caulk		SW-846 8082A	
PCB-3C	16K1272-02	Caulk		SW-846 8082A	
PCB-4C	16K1272-03	Caulk		SW-846 8082A	
PCB-5C	16K1272-04	Caulk		SW-846 8082A	
PCB-6C	16K1272-05	Caulk		SW-846 8082A	
PCB-9C	16K1272-06	Caulk		SW-846 8082A	
PCB-16D	16K1272-07	Caulk		SW-846 8082A	
PCB-19C	16K1272-08	Caulk		SW-846 8082A	
PCB-20C	16K1272-09	Caulk		SW-846 8082A	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16K1272-07[PCB-16D], 16K1272-09[PCB-20C]

Decachlorobiphenyl [2C]
16K1272-07[PCB-16D], 16K1272-09[PCB-20C]

Tetrachloro-m-xylene
16K1272-07[PCB-16D], 16K1272-09[PCB-20C]

Tetrachloro-m-xylene [2C]
16K1272-07[PCB-16D], 16K1272-09[PCB-20C]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-2C | Sampled: 11/22/2016 10:51

Sample ID: 16K1272-01

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1221 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1232 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1242 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1248 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1254 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1260 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1262 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL
Aroclor-1268 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:09	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.3	30-150		12/8/16 17:09
Decachlorobiphenyl [2]	89.0	30-150		12/8/16 17:09
Tetrachloro-m-xylene [1]	95.2	30-150		12/8/16 17:09
Tetrachloro-m-xylene [2]	93.2	30-150		12/8/16 17:09

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-3C | Sampled: 11/22/2016 10:58

Sample ID: 16K1272-02

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1221 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1232 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1242 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1248 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1254 [2]	0.87	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1260 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1262 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL
Aroclor-1268 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:26	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.1	30-150		12/8/16 17:26
Decachlorobiphenyl [2]	87.4	30-150		12/8/16 17:26
Tetrachloro-m-xylene [1]	88.2	30-150		12/8/16 17:26
Tetrachloro-m-xylene [2]	87.1	30-150		12/8/16 17:26

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-4C | Sampled: 11/22/2016 11:03

Sample ID: 16K1272-03

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1221 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1232 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1242 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1248 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1254 [2]	0.81	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1260 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1262 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL
Aroclor-1268 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 17:44	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.5	30-150		12/8/16 17:44
Decachlorobiphenyl [2]	82.7	30-150		12/8/16 17:44
Tetrachloro-m-xylene [1]	86.8	30-150		12/8/16 17:44
Tetrachloro-m-xylene [2]	86.8	30-150		12/8/16 17:44

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-5C | Sampled: 11/22/2016 11:06

Sample ID: 16K1272-04

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1221 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1232 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1242 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1248 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1254 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1260 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1262 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL
Aroclor-1268 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:02	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.2	30-150		12/8/16 18:02
Decachlorobiphenyl [2]	79.1	30-150		12/8/16 18:02
Tetrachloro-m-xylene [1]	92.1	30-150		12/8/16 18:02
Tetrachloro-m-xylene [2]	91.6	30-150		12/8/16 18:02

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-6C | Sampled: 11/22/2016 11:18

Sample ID: 16K1272-05

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1221 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1232 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1242 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1248 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1254 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1260 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1262 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL
Aroclor-1268 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:20	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.8	30-150		12/8/16 18:20
Decachlorobiphenyl [2]	84.7	30-150		12/8/16 18:20
Tetrachloro-m-xylene [1]	96.2	30-150		12/8/16 18:20
Tetrachloro-m-xylene [2]	96.1	30-150		12/8/16 18:20

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-9C | Sampled: 11/22/2016 11:25

Sample ID: 16K1272-06

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1221 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1232 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1242 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1248 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1254 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1260 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1262 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL
Aroclor-1268 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:38	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	62.1	30-150		12/8/16 18:38
Decachlorobiphenyl [2]	63.0	30-150		12/8/16 18:38
Tetrachloro-m-xylene [1]	45.9	30-150		12/8/16 18:38
Tetrachloro-m-xylene [2]	47.2	30-150		12/8/16 18:38

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-16D | Sampled: 11/22/2016 11:27

Sample ID: 16K1272-07

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1221 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1232 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1242 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1248 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1254 [1]	20000	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1260 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1262 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL
Aroclor-1268 [1]	ND	1700	mg/Kg	10000		SW-846 8082A	12/6/16	12/9/16 9:27	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	12/9/16 9:27
Decachlorobiphenyl [2]	*	30-150	S-01	12/9/16 9:27
Tetrachloro-m-xylene [1]	*	30-150	S-01	12/9/16 9:27
Tetrachloro-m-xylene [2]	*	30-150	S-01	12/9/16 9:27

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-19C | Sampled: 11/22/2016 11:34

Sample ID: 16K1272-08

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1221 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1232 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1242 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1248 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1254 [1]	9.0	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1260 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1262 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL
Aroclor-1268 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	11/27/16	12/8/16 18:56	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.4	30-150		12/8/16 18:56
Decachlorobiphenyl [2]	86.7	30-150		12/8/16 18:56
Tetrachloro-m-xylene [1]	90.0	30-150		12/8/16 18:56
Tetrachloro-m-xylene [2]	91.2	30-150		12/8/16 18:56

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1272

Date Received: 11/23/2016

Field Sample #: PCB-20C | Sampled: 11/22/2016 11:56

Sample ID: 16K1272-09

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1221 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1232 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1242 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1248 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1254 [2]	67	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1260 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1262 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL
Aroclor-1268 [1]	ND	9.5	mg/Kg	50		SW-846 8082A	11/27/16	12/8/16 19:14	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	12/8/16 19:14
Decachlorobiphenyl [2]	*	30-150	S-01	12/8/16 19:14
Tetrachloro-m-xylene [1]	*	30-150	S-01	12/8/16 19:14
Tetrachloro-m-xylene [2]	*	30-150	S-01	12/8/16 19:14

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16K1272-01 [PCB-2C]	B164222	0.545	10.0	11/27/16
16K1272-02 [PCB-3C]	B164222	0.536	10.0	11/27/16
16K1272-03 [PCB-4C]	B164222	0.532	10.0	11/27/16
16K1272-04 [PCB-5C]	B164222	0.545	10.0	11/27/16
16K1272-05 [PCB-6C]	B164222	0.515	10.0	11/27/16
16K1272-06 [PCB-9C]	B164222	0.517	10.0	11/27/16
16K1272-08 [PCB-19C]	B164222	0.546	10.0	11/27/16
16K1272-09 [PCB-20C]	B164222	0.524	10.0	11/27/16

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16K1272-07 [PCB-16D]	B165055	0.573	10.0	12/06/16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B164222 - SW-846 3540C										
Blank (B164222-BLK1)				Prepared: 11/27/16 Analyzed: 11/30/16						
Aroclor-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Aroclor-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0.20	mg/Kg							
Aroclor-1254	ND	0.20	mg/Kg							
Aroclor-1254 [2C]	ND	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0.20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Aroclor-1268 [2C]	ND	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.50*		mg/Kg	3.99		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.16*		mg/Kg	3.99		79.0	30-150			
Surrogate: Tetrachloro-m-xylene	*3.34*		mg/Kg	3.99		83.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.17*		mg/Kg	3.99		79.4	30-150			
LCS (B164222-BS1)				Prepared: 11/27/16 Analyzed: 11/30/16						
Aroclor-1016	3.4	0.20	mg/Kg	3.95		85.6	40-140			
Aroclor-1016 [2C]	3.4	0.20	mg/Kg	3.95		85.0	40-140			
Aroclor-1260	3.5	0.20	mg/Kg	3.95		89.0	40-140			
Aroclor-1260 [2C]	3.3	0.20	mg/Kg	3.95		83.4	40-140			
Surrogate: Decachlorobiphenyl	*3.68*		mg/Kg	3.95		93.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.37*		mg/Kg	3.95		85.1	30-150			
Surrogate: Tetrachloro-m-xylene	*3.41*		mg/Kg	3.95		86.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.21*		mg/Kg	3.95		81.2	30-150			
LCS Dup (B164222-BSD1)				Prepared: 11/27/16 Analyzed: 11/30/16						
Aroclor-1016	3.4	0.20	mg/Kg	3.96		86.8	40-140	1.52	30	
Aroclor-1016 [2C]	3.6	0.20	mg/Kg	3.96		89.7	40-140	5.60	30	
Aroclor-1260	3.5	0.20	mg/Kg	3.96		89.5	40-140	0.679	30	
Aroclor-1260 [2C]	3.3	0.20	mg/Kg	3.96		82.8	40-140	0.632	30	
Surrogate: Decachlorobiphenyl	*3.69*		mg/Kg	3.96		93.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.37*		mg/Kg	3.96		85.2	30-150			
Surrogate: Tetrachloro-m-xylene	*3.53*		mg/Kg	3.96		89.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.33*		mg/Kg	3.96		84.1	30-150			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B165055 - SW-846 3540C										
Blank (B165055-BLK1)				Prepared: 12/06/16 Analyzed: 12/08/16						
Aroclor-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Aroclor-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0.20	mg/Kg							
Aroclor-1254	ND	0.20	mg/Kg							
Aroclor-1254 [2C]	ND	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0.20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Aroclor-1268 [2C]	ND	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.69*		mg/Kg	4.00		92.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.46*		mg/Kg	4.00		86.6	30-150			
Surrogate: Tetrachloro-m-xylene	*3.38*		mg/Kg	4.00		84.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.28*		mg/Kg	4.00		82.0	30-150			
LCS (B165055-BS1)				Prepared: 12/06/16 Analyzed: 12/08/16						
Aroclor-1016	3.4	0.20	mg/Kg	4.00		84.3	40-140			
Aroclor-1016 [2C]	3.4	0.20	mg/Kg	4.00		84.3	40-140			
Aroclor-1260	3.5	0.20	mg/Kg	4.00		86.8	40-140			
Aroclor-1260 [2C]	3.3	0.20	mg/Kg	4.00		81.8	40-140			
Surrogate: Decachlorobiphenyl	*3.70*		mg/Kg	4.00		92.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.49*		mg/Kg	4.00		87.4	30-150			
Surrogate: Tetrachloro-m-xylene	*3.35*		mg/Kg	4.00		83.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.26*		mg/Kg	4.00		81.5	30-150			
LCS Dup (B165055-BSD1)				Prepared: 12/06/16 Analyzed: 12/08/16						
Aroclor-1016	3.5	0.20	mg/Kg	4.00		88.1	40-140	4.41	30	
Aroclor-1016 [2C]	3.5	0.20	mg/Kg	4.00		88.4	40-140	4.70	30	
Aroclor-1260	3.5	0.20	mg/Kg	4.00		88.6	40-140	2.05	30	
Aroclor-1260 [2C]	3.4	0.20	mg/Kg	4.00		83.9	40-140	2.51	30	
Surrogate: Decachlorobiphenyl	*3.79*		mg/Kg	4.00		94.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.56*		mg/Kg	4.00		88.9	30-150			
Surrogate: Tetrachloro-m-xylene	*3.44*		mg/Kg	4.00		86.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.34*		mg/Kg	4.00		83.4	30-150			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-3C

Lab Sample ID: 16K1272-02 Date(s) Analyzed: 12/08/2016 12/08/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.85	
	2	0.00	0.00	0.00	0.87	2.8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-16D

Lab Sample ID: 16K1272-07 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	20000	
	2	0.00	0.00	0.00	20000	0.5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-19C

Lab Sample ID: 16K1272-08 Date(s) Analyzed: 12/08/2016 12/08/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	9.0	
	2	0.00	0.00	0.00	8.7	3.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-20C

Lab Sample ID: 16K1272-09 Date(s) Analyzed: 12/08/2016 12/08/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	66	
	2	0.00	0.00	0.00	67	1.8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B164222-BS1 Date(s) Analyzed: 11/30/2016 11/30/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	3.4	
	2	0.00	0.00	0.00	3.4	1
Aroclor-1260	1	0.00	0.00	0.00	3.5	
	2	0.00	0.00	0.00	3.3	6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B164222-BSD1 Date(s) Analyzed: 11/30/2016 11/30/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	3.4	
	2	0.00	0.00	0.00	3.6	5
Aroclor-1260	1	0.00	0.00	0.00	3.5	
	2	0.00	0.00	0.00	3.3	7

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B165055-BS1 Date(s) Analyzed: 12/08/2016 12/08/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	3.4	
	2	0.00	0.00	0.00	3.4	1
Aroclor-1260	1	0.00	0.00	0.00	3.5	
	2	0.00	0.00	0.00	3.3	5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B165055-BSD1 Date(s) Analyzed: 12/08/2016 12/08/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	3.5	
	2	0.00	0.00	0.00	3.5	1
Aroclor-1260	1	0.00	0.00	0.00	3.5	
	2	0.00	0.00	0.00	3.4	4

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

CHAIN OF CUSTODY RECORD

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

16K1272

Rev 04.05.12

Company Name: ATC Group Services
Address: 171 Commerce St. Williston, VT 05495
Attention: Devin Porter
Project Location: St. Johnsbury Armory
Sampled By: Devin Porter

Telephone: 802-862-1980
Project #: 280B500783
Client PO#:

DATA DELIVERY (check all that apply)
○ FAX ✓ EMAIL ○ WEBSITE
Fax #:
Email: devin.porter@atcassociates.com
Format: ✓ PDF ✓ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code
01	PCB-2C 11-22-16	1051	N/A	No	✓	O	U
02	PCB-3C	1058					
03	PCB-4C	1103					
04	PCB-5C	1106					
05	PCB-6C	1118					
06	PCB-9C	1125					
07	PCB-16D	1127					
08	PCB-19C	1134					
09	PCB-20C	1136					

ANALYSIS REQUESTED

	1	2	3	4	5	6	7	8	9	10	11
# of Containers											
** Preservation											
***Container Code	P										
	3540 Prep (SW846-8082 with)										
	✓										
	✓										
	✓										
	✓										
	✓										
	✓										
	✓										
	✓										
	✓										

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW = groundwater
WW = wastewater
DW = drinking water
A = air
S = soil/solid
SL = sludge
O = other Bulk

Comments: Hold 16D until approved

16D off hold 11/28 - JMG

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
[signature]	11-22-16 1730
Received by: (signature) 5.0 [signature]	11/23/16 1036
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround ††
☐ 7-Day
☑ 10-Day
☐ Other
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: ATC **RECEIVED BY:** RJM **DATE:** 11/28/16

1) **Was the chain(s) of custody relinquished and signed?** **Yes** X **No** ____ **No COC Incl.**

2) **Does the chain agree with the samples?** **Yes** X **No** ____
If not, explain:

3) **Are all the samples in good condition?** **Yes** X **No** ____
If not, explain:

4) **How were the samples received:**
On Ice X Direct from Sampling ____ Ambient ____ In Cooler(s) X

Were the samples received in Temperature Compliance of (2-6°C)? **Yes** X **No** ____ **N/A** ____

Temperature °C by Temp blank ____ Temperature °C by Temp gun 5.0

5) **Are there Dissolved samples for the lab to filter?** **Yes** ____ **No** X
Who was notified ____ Date ____ Time ____

6) **Are there any RUSH or SHORT HOLDING TIME samples?** **Yes** ____ **No** X
Who was notified ____ Date ____ Time ____

7) **Location where samples are stored:**

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** **Yes** ____ **No** ____ **N/A** X

9) **Do all samples have the proper Base pH:** **Yes** ____ **No** ____ **N/A** X

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** **Yes** ____ **N/A** X

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	9
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____ **Time and Date Frozen:**
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	NA	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** RJM **Date/Time:** 11/23/16 1036

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 9, 2016

Jesse Stratton
ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495

Project Location: St Johnsbury Armory
Client Job Number:
Project Number: 280BS00783
Laboratory Work Order Number: 16K1276

Enclosed are results of analyses for samples received by the laboratory on November 23, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

16K1276-01 5

16K1276-02 6

16K1276-03 7

16K1276-04 8

16K1276-05 9

16K1276-06 10

16K1276-07 11

16K1276-08 12

16K1276-09 13

16K1276-10 14

16K1276-11 15

16K1276-12 16

Sample Preparation Information 17

QC Data 18

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 18

B165149 18

Dual Column RPD Report 19

Flag/Qualifier Summary 32

Certifications 33

Chain of Custody/Sample Receipt 34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495
ATTN: Jesse Stratton

REPORT DATE: 12/9/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 280BS00783

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16K1276

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: St Johnsbury Armory

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
W-01	16K1276-01	Wipe		SW-846 8082A	
W-02	16K1276-02	Wipe		SW-846 8082A	
W-03	16K1276-03	Wipe		SW-846 8082A	
W-04	16K1276-04	Wipe		SW-846 8082A	
W-05	16K1276-05	Wipe		SW-846 8082A	
W-06	16K1276-06	Wipe		SW-846 8082A	
W-07	16K1276-07	Wipe		SW-846 8082A	
W-08	16K1276-08	Wipe		SW-846 8082A	
W-09	16K1276-09	Wipe		SW-846 8082A	
W-10	16K1276-10	Wipe		SW-846 8082A	
W-11	16K1276-11	Wipe		SW-846 8082A	
W-12	16K1276-12	Wipe		SW-846 8082A	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

16K1276-01[W-01], 16K1276-02[W-02], 16K1276-03[W-03], 16K1276-04[W-04], 16K1276-05[W-05], 16K1276-06[W-06], 16K1276-07[W-07], 16K1276-08[W-08], 16K1276-09[W-09], 16K1276-10[W-10], 16K1276-11[W-11], 16K1276-12[W-12]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16K1276-02[W-02], 16K1276-04[W-04]

Decachlorobiphenyl [2C]
16K1276-02[W-02], 16K1276-04[W-04]

Tetrachloro-m-xylene
16K1276-02[W-02], 16K1276-04[W-04]

Tetrachloro-m-xylene [2C]
16K1276-02[W-02], 16K1276-04[W-04]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-01 | Sampled: 11/22/2016 09:12

Sample ID: 16K1276-01

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1254 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 5:33	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.2	30-150		12/9/16 5:33
Decachlorobiphenyl [2]	90.7	30-150		12/9/16 5:33
Tetrachloro-m-xylene [1]	86.3	30-150		12/9/16 5:33
Tetrachloro-m-xylene [2]	81.1	30-150		12/9/16 5:33

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-02 | Sampled: 11/22/2016 09:15

Sample ID: 16K1276-02

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1221 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1232 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1242 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1248 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1254 [2]	4500	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1260 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1262 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG
Aroclor-1268 [1]	ND	2000	µg/Wipe	10000		SW-846 8082A	12/7/16	12/9/16 10:45	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	12/9/16 10:45
Decachlorobiphenyl [2]	*	30-150	S-01	12/9/16 10:45
Tetrachloro-m-xylene [1]	*	30-150	S-01	12/9/16 10:45
Tetrachloro-m-xylene [2]	*	30-150	S-01	12/9/16 10:45

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-03 | Sampled: 11/22/2016 09:26

Sample ID: 16K1276-03

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1221 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1232 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1242 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1248 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1254 [1]	23	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1260 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1262 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG
Aroclor-1268 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	12/7/16	12/9/16 11:02	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	107	30-150		12/9/16 11:02
Decachlorobiphenyl [2]	103	30-150		12/9/16 11:02
Tetrachloro-m-xylene [1]	104	30-150		12/9/16 11:02
Tetrachloro-m-xylene [2]	100	30-150		12/9/16 11:02

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-04 | Sampled: 11/22/2016 09:29

Sample ID: 16K1276-04

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1221 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1232 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1242 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1248 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1254 [1]	110	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1260 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1262 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG
Aroclor-1268 [1]	ND	20	µg/Wipe	100		SW-846 8082A	12/7/16	12/9/16 11:19	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	12/9/16 11:19
Decachlorobiphenyl [2]	*	30-150	S-01	12/9/16 11:19
Tetrachloro-m-xylene [1]	*	30-150	S-01	12/9/16 11:19
Tetrachloro-m-xylene [2]	*	30-150	S-01	12/9/16 11:19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-05 | Sampled: 11/22/2016 09:35

Sample ID: 16K1276-05

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1221 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1232 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1242 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1248 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1254 [2]	3.7	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1260 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1262 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG
Aroclor-1268 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:37	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.7	30-150		12/9/16 11:37
Decachlorobiphenyl [2]	92.7	30-150		12/9/16 11:37
Tetrachloro-m-xylene [1]	95.5	30-150		12/9/16 11:37
Tetrachloro-m-xylene [2]	87.0	30-150		12/9/16 11:37

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-06 | Sampled: 11/22/2016 09:38

Sample ID: 16K1276-06

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1221 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1232 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1242 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1248 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1254 [1]	5.2	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1260 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1262 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG
Aroclor-1268 [1]	ND	0.80	µg/Wipe	4		SW-846 8082A	12/7/16	12/9/16 11:54	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.2	30-150		12/9/16 11:54
Decachlorobiphenyl [2]	87.8	30-150		12/9/16 11:54
Tetrachloro-m-xylene [1]	97.0	30-150		12/9/16 11:54
Tetrachloro-m-xylene [2]	89.1	30-150		12/9/16 11:54

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-07 | Sampled: 11/22/2016 09:42

Sample ID: 16K1276-07

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1254 [1]	2.0	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 6:47	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	76.5	30-150		12/9/16 6:47
Decachlorobiphenyl [2]	78.1	30-150		12/9/16 6:47
Tetrachloro-m-xylene [1]	82.7	30-150		12/9/16 6:47
Tetrachloro-m-xylene [2]	77.5	30-150		12/9/16 6:47

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-08 | Sampled: 11/22/2016 09:46

Sample ID: 16K1276-08

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1254 [2]	0.89	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 12:11	PJG

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	**23.9**	*	30-150		12/9/16 12:11
Decachlorobiphenyl [2]	**23.6**	*	30-150		12/9/16 12:11
Tetrachloro-m-xylene [1]	**28.6**	*	30-150		12/9/16 12:11
Tetrachloro-m-xylene [2]	**26.5**	*	30-150		12/9/16 12:11

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-09 | Sampled: 11/22/2016 09:50

Sample ID: 16K1276-09

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1254 [2]	0.22	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 7:11	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.9	30-150		12/9/16 7:11
Decachlorobiphenyl [2]	77.1	30-150		12/9/16 7:11
Tetrachloro-m-xylene [1]	83.7	30-150		12/9/16 7:11
Tetrachloro-m-xylene [2]	79.8	30-150		12/9/16 7:11

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-10 | Sampled: 11/22/2016 09:53

Sample ID: 16K1276-10

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1221 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1232 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1242 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1248 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1254 [2]	9.4	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1260 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1262 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG
Aroclor-1268 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	12/7/16	12/9/16 12:28	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.2	30-150		12/9/16 12:28
Decachlorobiphenyl [2]	79.2	30-150		12/9/16 12:28
Tetrachloro-m-xylene [1]	88.3	30-150		12/9/16 12:28
Tetrachloro-m-xylene [2]	79.3	30-150		12/9/16 12:28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-11 | Sampled: 11/22/2016 09:57

Sample ID: 16K1276-11

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1254 [2]	0.81	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:12	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.7	30-150		12/9/16 8:12
Decachlorobiphenyl [2]	80.4	30-150		12/9/16 8:12
Tetrachloro-m-xylene [1]	86.1	30-150		12/9/16 8:12
Tetrachloro-m-xylene [2]	79.5	30-150		12/9/16 8:12

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury Armory | Sample Description: | Work Order: 16K1276

Date Received: 11/23/2016

Field Sample #: W-12 | Sampled: 11/22/2016 10:02

Sample ID: 16K1276-12

Sample Matrix: Wipe

Sample Flags: H-06

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1254 [1]	0.34	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	12/7/16	12/9/16 8:24	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	79.7	30-150		12/9/16	8:24
Decachlorobiphenyl [2]	77.1	30-150		12/9/16	8:24
Tetrachloro-m-xylene [1]	87.2	30-150		12/9/16	8:24
Tetrachloro-m-xylene [2]	82.9	30-150		12/9/16	8:24

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
16K1276-01 [W-01]	B165149	1.00	10.0	12/07/16
16K1276-02 [W-02]	B165149	1.00	10.0	12/07/16
16K1276-03 [W-03]	B165149	1.00	10.0	12/07/16
16K1276-04 [W-04]	B165149	1.00	10.0	12/07/16
16K1276-05 [W-05]	B165149	1.00	10.0	12/07/16
16K1276-06 [W-06]	B165149	1.00	10.0	12/07/16
16K1276-07 [W-07]	B165149	1.00	10.0	12/07/16
16K1276-08 [W-08]	B165149	1.00	10.0	12/07/16
16K1276-09 [W-09]	B165149	1.00	10.0	12/07/16
16K1276-10 [W-10]	B165149	1.00	10.0	12/07/16
16K1276-11 [W-11]	B165149	1.00	10.0	12/07/16
16K1276-12 [W-12]	B165149	1.00	10.0	12/07/16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B165149 - SW-846 3540C										
Blank (B165149-BLK1)				Prepared: 12/07/16 Analyzed: 12/09/16						
Aroclor-1016	ND	0.20	µg/Wipe							
Aroclor-1016 [2C]	ND	0.20	µg/Wipe							
Aroclor-1221	ND	0.20	µg/Wipe							
Aroclor-1221 [2C]	ND	0.20	µg/Wipe							
Aroclor-1232	ND	0.20	µg/Wipe							
Aroclor-1232 [2C]	ND	0.20	µg/Wipe							
Aroclor-1242	ND	0.20	µg/Wipe							
Aroclor-1242 [2C]	ND	0.20	µg/Wipe							
Aroclor-1248	ND	0.20	µg/Wipe							
Aroclor-1248 [2C]	ND	0.20	µg/Wipe							
Aroclor-1254	ND	0.20	µg/Wipe							
Aroclor-1254 [2C]	ND	0.20	µg/Wipe							
Aroclor-1260	ND	0.20	µg/Wipe							
Aroclor-1260 [2C]	ND	0.20	µg/Wipe							
Aroclor-1262	ND	0.20	µg/Wipe							
Aroclor-1262 [2C]	ND	0.20	µg/Wipe							
Aroclor-1268	ND	0.20	µg/Wipe							
Aroclor-1268 [2C]	ND	0.20	µg/Wipe							
Surrogate: Decachlorobiphenyl	*1.95*		µg/Wipe	2.00		97.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.89*		µg/Wipe	2.00		94.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.89*		µg/Wipe	2.00		94.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.74*		µg/Wipe	2.00		87.1	30-150			
LCS (B165149-BS1)				Prepared: 12/07/16 Analyzed: 12/09/16						
Aroclor-1016	0.49	0.20	µg/Wipe	0.500		97.9	40-140			
Aroclor-1016 [2C]	0.46	0.20	µg/Wipe	0.500		92.1	40-140			
Aroclor-1260	0.46	0.20	µg/Wipe	0.500		91.3	40-140			
Aroclor-1260 [2C]	0.42	0.20	µg/Wipe	0.500		84.1	40-140			
Surrogate: Decachlorobiphenyl	*1.95*		µg/Wipe	2.00		97.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.90*		µg/Wipe	2.00		94.9	30-150			
Surrogate: Tetrachloro-m-xylene	*1.89*		µg/Wipe	2.00		94.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.74*		µg/Wipe	2.00		87.2	30-150			
LCS Dup (B165149-BSD1)				Prepared: 12/07/16 Analyzed: 12/09/16						
Aroclor-1016	0.50	0.20	µg/Wipe	0.500		99.7	40-140	1.89	30	
Aroclor-1016 [2C]	0.46	0.20	µg/Wipe	0.500		92.8	40-140	0.777	30	
Aroclor-1260	0.48	0.20	µg/Wipe	0.500		96.6	40-140	5.59	30	
Aroclor-1260 [2C]	0.44	0.20	µg/Wipe	0.500		87.3	40-140	3.76	30	
Surrogate: Decachlorobiphenyl	*1.99*		µg/Wipe	2.00		99.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.93*		µg/Wipe	2.00		96.5	30-150			
Surrogate: Tetrachloro-m-xylene	*1.91*		µg/Wipe	2.00		95.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.76*		µg/Wipe	2.00		88.2	30-150			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-02

Lab Sample ID: 16K1276-02 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	4400	
	2	0.00	0.00	0.00	4500	2.7

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-03

Lab Sample ID: 16K1276-03 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	23	
	2	0.00	0.00	0.00	22	4.9

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-04

Lab Sample ID: 16K1276-04 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	110	
	2	0.00	0.00	0.00	110	4.4

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-05

Lab Sample ID: 16K1276-05 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	3.5	
	2	0.00	0.00	0.00	3.7	6.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-06

Lab Sample ID: 16K1276-06 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	5.2	
	2	0.00	0.00	0.00	5.1	1.4

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-07

Lab Sample ID: 16K1276-07 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	2.0	
	2	0.00	0.00	0.00	1.9	7.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-08

Lab Sample ID: 16K1276-08 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.73	
	2	0.00	0.00	0.00	0.89	19.9

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-09

Lab Sample ID: 16K1276-09 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.22	0.9

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-10

Lab Sample ID: 16K1276-10 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	8.7	
	2	0.00	0.00	0.00	9.4	8.0

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-11

Lab Sample ID: 16K1276-11 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.73	
	2	0.00	0.00	0.00	0.81	10.7

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

W-12

Lab Sample ID: 16K1276-12 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.34	
	2	0.00	0.00	0.00	0.33	4.2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B165149-BS1 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.49	
	2	0.00	0.00	0.00	0.46	6
Aroclor-1260	1	0.00	0.00	0.00	0.46	
	2	0.00	0.00	0.00	0.42	8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B165149-BSD1 Date(s) Analyzed: 12/09/2016 12/09/2016

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.50	
	2	0.00	0.00	0.00	0.46	8
Aroclor-1260	1	0.00	0.00	0.00	0.48	
	2	0.00	0.00	0.00	0.44	9

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-06	Sample was extracted past the recommended holding time.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

CHAIN OF CUSTODY RECORD

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

16K1276

Rev 04.05.12

Company Name: ATC Group Services
Address: 171 Commerce St.
Williston, VT 05495
Attention: Devin Porter
Project Location: St. Johnsbury Armory
Sampled By: Devin Porter

Telephone: 802-862-1980
Project #: 280BS00783
Client PO#:

DATA DELIVERY (check all that apply)
○ FAX ☑ EMAIL ○ WEBSITE
Fax #:
Email: devin.porter@atcassociates.com
Format: ☑ PDF ☑ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Container Code	1	0	G	8082A/3550B PCBs
01	W-01 11.22.16	0912	N/A	No		0	U				✓
02	W-02	0915									✓
03	W-03	0926									✓
04	W-04	0929									✓
05	W-05	0935									✓
06	W-06	0938									✓
07	W-07	0942									✓
08	W-08	0946									✓
09	W-09	0950									✓
10	W-10	0953									✓

ANALYSIS REQUESTED

# of Containers
** Preservation
***Container Code

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other Hexane

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other wipe (dust)

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
[signature] 11.22	16 1300
Received by: (signature) [signature] 11/22/16	Date/Time: 1036
linquished by: (signature)	Date/Time:
ceived by: (signature)	Date/Time:

Turnaround ††
☐ 7-Day
☑ 10-Day
☐ Other
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

CHAIN OF CUSTODY RECORD

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Rev 04.05.12

Company Name: ATC Group Services
Address: 171 Commerce St.
Williston, VT 05495
Attention: Devin Porter
Project Location: St. Johnsbury Armory
Sampled By: Devin Porter

Telephone: 802-862-1980
Project #: Z80BS00768-783
Client PO#:

DATA DELIVERY (check all that apply)
○ FAX ✓ EMAIL ○ WEBSITE
Fax #:
Email: devin.porter@atcassociates.com
Format: ✓ PDF ✓ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	***Container Code	ANALYSIS REQUESTED: 8082A/3550B PCBs
11	W-11	11.22.16 0957	N/A	No	No	O	U	1	O	G	✓
12	W-12	↓ 09/1002	↓	No	No	O	U	1	O	G	✓

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other Hexane

*Matrix Code:
GW = groundwater
WW = wastewater
DW = drinking water
A = air
S = soil/solid
SL = sludge
O = other Wipe (dust)

Relinquished by: (signature)	Date/Time:
	11.22.16 1300
Received by: (signature)	Date/Time:
	11/23/16 1030
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround ††
☐ 7-Day
☑ 10-Day
☐ Other
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: ATC **RECEIVED BY:** RJM **DATE:** 11/23/16

1) **Was the chain(s) of custody relinquished and signed?** **Yes** X **No** ____ **No COC Incl.**
2) **Does the chain agree with the samples?** **Yes** X **No** ____
If not, explain:
3) **Are all the samples in good condition?** **Yes** X **No** ____
If not, explain:
4) **How were the samples received:**

On Ice X Direct from Sampling ____ Ambient ____ In Cooler(s) X

Were the samples received in Temperature Compliance of (2-6°C)? **Yes** X **No** ____ **N/A** ____

Temperature °C by Temp blank ____ Temperature °C by Temp gun 5.0

5) **Are there Dissolved samples for the lab to filter?** **Yes** ____ **No** X
Who was notified ____ Date ____ Time ____
6) **Are there any RUSH or SHORT HOLDING TIME samples?** **Yes** ____ **No** X
Who was notified ____ Date ____ Time ____
7) **Location where samples are stored:**

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** **Yes** ____ **No** ____ **N/A** X
9) **Do all samples have the proper Base pH:** **Yes** ____ **No** ____ **N/A** X
10) **Was the PC notified of any discrepancies with the CoC vs the samples:** **Yes** ____ **N/A** X

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	12
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____ **Time and Date Frozen:**
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	NA	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** RJM **Date/Time:** 11/23/16 1036

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

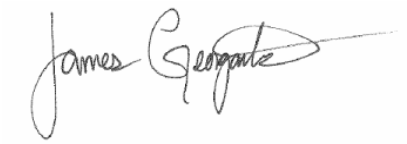
January 10, 2017

Jesse Stratton
ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: 280BS00783
Laboratory Work Order Number: 16L1356

Enclosed are results of analyses for samples received by the laboratory on December 29, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

16L1356-01 6

16L1356-02 7

16L1356-03 8

16L1356-04 9

16L1356-05 10

16L1356-06 11

16L1356-07 12

16L1356-08 13

16L1356-09 14

16L1356-10 15

16L1356-11 16

16L1356-12 17

16L1356-13 18

16L1356-14 19

16L1356-15 20

16L1356-16 21

16L1356-17 22

16L1356-18 23

16L1356-19 24

16L1356-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B167254 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495
ATTN: Jesse Stratton

REPORT DATE: 1/10/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 280BS00783

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16L1356

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PCB-CC-01A	16L1356-01	Concrete		SW-846 8082A	
PCB-CC-01B	16L1356-02	Concrete		SW-846 8082A	
PCB-CC-01C	16L1356-03	Concrete		SW-846 8082A	
PCB-CC-01D	16L1356-04	Concrete		SW-846 8082A	
PCB-CC-02A	16L1356-05	Concrete		SW-846 8082A	
PCB-CC-02B	16L1356-06	Concrete		SW-846 8082A	
PCB-CC-02C	16L1356-07	Concrete		SW-846 8082A	
PCB-CC-02D	16L1356-08	Concrete		SW-846 8082A	
PCB-CC-03A	16L1356-09	Concrete		SW-846 8082A	
PCB-CC-03B	16L1356-10	Concrete		SW-846 8082A	
PCB-CC-03C	16L1356-11	Concrete		SW-846 8082A	
PCB-CC-03D	16L1356-12	Concrete		SW-846 8082A	
PCB-CC-04A	16L1356-13	Concrete		SW-846 8082A	
PCB-CC-04B	16L1356-14	Concrete		SW-846 8082A	
PCB-CC-04C	16L1356-15	Concrete		SW-846 8082A	
PCB-CC-04D	16L1356-16	Concrete		SW-846 8082A	
PCB-CC-05A	16L1356-17	Concrete		SW-846 8082A	
PCB-CC-05B	16L1356-18	Concrete		SW-846 8082A	
PCB-CC-05C	16L1356-19	Concrete		SW-846 8082A	
PCB-CC-05D	16L1356-20	Concrete		SW-846 8082A	

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B167254-MS1, B167254-MSD1

Aroclor-1016 [2C]
B167254-MS1, B167254-MSD1

Aroclor-1260
B167254-MS1, B167254-MSD1

Aroclor-1260 [2C]
B167254-MS1, B167254-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16L1356-01[PCB-CC-01A], 16L1356-02[PCB-CC-01B], 16L1356-03[PCB-CC-01C], 16L1356-04[PCB-CC-01D], 16L1356-05[PCB-CC-02A], 16L1356-06[PCB-CC-02B], 16L1356-13[PCB-CC-04A], 16L1356-17[PCB-CC-05A]

Decachlorobiphenyl [2C]
16L1356-01[PCB-CC-01A], 16L1356-02[PCB-CC-01B], 16L1356-03[PCB-CC-01C], 16L1356-04[PCB-CC-01D], 16L1356-05[PCB-CC-02A], 16L1356-06[PCB-CC-02B], 16L1356-13[PCB-CC-04A], 16L1356-17[PCB-CC-05A]

Tetrachloro-m-xylene
16L1356-01[PCB-CC-01A], 16L1356-02[PCB-CC-01B], 16L1356-03[PCB-CC-01C], 16L1356-04[PCB-CC-01D], 16L1356-05[PCB-CC-02A], 16L1356-06[PCB-CC-02B], 16L1356-13[PCB-CC-04A], 16L1356-17[PCB-CC-05A]

Tetrachloro-m-xylene [2C]
16L1356-01[PCB-CC-01A], 16L1356-02[PCB-CC-01B], 16L1356-03[PCB-CC-01C], 16L1356-04[PCB-CC-01D], 16L1356-05[PCB-CC-02A], 16L1356-06[PCB-CC-02B], 16L1356-13[PCB-CC-04A], 16L1356-17[PCB-CC-05A]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-01A | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-01

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1221 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1232 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1242 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1248 [2]	350	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1254 [2]	690	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1260 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1262 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB
Aroclor-1268 [1]	ND	99	mg/Kg	1000		SW-846 8082A	1/5/17	1/8/17 13:02	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/8/17 13:02
Decachlorobiphenyl [2]	*	30-150	S-01	1/8/17 13:02
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/8/17 13:02
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/8/17 13:02

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-01B | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-02

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1221 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1232 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1242 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1248 [2]	220	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1254 [2]	430	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1260 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1262 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB
Aroclor-1268 [1]	ND	47	mg/Kg	500		SW-846 8082A	1/5/17	1/7/17 16:56	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 16:56
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 16:56
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 16:56
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 16:56

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-01C | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-03

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1221 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1232 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1242 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1248 [2]	76	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1254 [2]	150	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1260 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1262 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB
Aroclor-1268 [1]	ND	19	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:13	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 17:13
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 17:13
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 17:13
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 17:13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-01D | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-04

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1221 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1232 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1242 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1248 [1]	100	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1254 [1]	210	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1260 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1262 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB
Aroclor-1268 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 17:31	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 17:31
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 17:31
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 17:31
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 17:31

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-02A | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-05

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1221 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1232 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1242 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1248 [2]	31	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1254 [2]	51	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1260 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1262 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB
Aroclor-1268 [1]	ND	9.6	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 17:49	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 17:49
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 17:49
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 17:49
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 17:49

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-02B | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-06

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1221 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1232 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1242 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1248 [2]	16	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1254 [2]	29	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1260 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1262 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB
Aroclor-1268 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 18:07	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 18:07
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 18:07
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 18:07
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 18:07

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-02C | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-07

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1221 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1232 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1242 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1248 [2]	1.3	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1254 [2]	2.0	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1260 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1262 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB
Aroclor-1268 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 18:24	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.9	30-150		1/7/17 18:24
Decachlorobiphenyl [2]	96.6	30-150		1/7/17 18:24
Tetrachloro-m-xylene [1]	76.5	30-150		1/7/17 18:24
Tetrachloro-m-xylene [2]	93.2	30-150		1/7/17 18:24

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-02D | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-08

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1221 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1232 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1242 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1248 [1]	1.1	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1254 [2]	1.4	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1260 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1262 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB
Aroclor-1268 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 18:42	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.0	30-150		1/7/17 18:42
Decachlorobiphenyl [2]	91.6	30-150		1/7/17 18:42
Tetrachloro-m-xylene [1]	74.8	30-150		1/7/17 18:42
Tetrachloro-m-xylene [2]	84.1	30-150		1/7/17 18:42

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-03A | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-09

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1221 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1232 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1242 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1248 [2]	6.3	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1254 [2]	14	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1260 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1262 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB
Aroclor-1268 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:00	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	128	30-150		1/7/17 19:00
Decachlorobiphenyl [2]	138	30-150		1/7/17 19:00
Tetrachloro-m-xylene [1]	102	30-150		1/7/17 19:00
Tetrachloro-m-xylene [2]	132	30-150		1/7/17 19:00

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-03B | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-10

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1221 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1232 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1242 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1248 [2]	1.1	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1254 [2]	2.4	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1260 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1262 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB
Aroclor-1268 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:18	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	105	30-150		1/7/17 19:18
Decachlorobiphenyl [2]	112	30-150		1/7/17 19:18
Tetrachloro-m-xylene [1]	91.2	30-150		1/7/17 19:18
Tetrachloro-m-xylene [2]	107	30-150		1/7/17 19:18

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-03C | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-11

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1221 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1232 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1242 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1248 [2]	1.0	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1254 [2]	2.2	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1260 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1262 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB
Aroclor-1268 [1]	ND	0.44	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 20:23	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	111	30-150		1/7/17 20:23
Decachlorobiphenyl [2]	105	30-150		1/7/17 20:23
Tetrachloro-m-xylene [1]	82.7	30-150		1/7/17 20:23
Tetrachloro-m-xylene [2]	97.2	30-150		1/7/17 20:23

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-03D | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-12

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1221 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1232 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1242 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1248 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1254 [2]	0.12	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1260 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1262 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB
Aroclor-1268 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:32	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.7	30-150		1/7/17 0:32
Decachlorobiphenyl [2]	74.5	30-150		1/7/17 0:32
Tetrachloro-m-xylene [1]	71.5	30-150		1/7/17 0:32
Tetrachloro-m-xylene [2]	70.4	30-150		1/7/17 0:32

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-04A | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-13

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1221 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1232 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1242 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1248 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1254 [2]	26	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1260 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1262 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB
Aroclor-1268 [1]	ND	8.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:41	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 20:41
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 20:41
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 20:41
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 20:41

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-04B | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-14

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1221 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1232 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1242 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1248 [2]	6.6	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1254 [2]	14	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1260 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1262 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB
Aroclor-1268 [1]	ND	1.9	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 20:59	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	120	30-150		1/7/17 20:59
Decachlorobiphenyl [2]	139	30-150		1/7/17 20:59
Tetrachloro-m-xylene [1]	102	30-150		1/7/17 20:59
Tetrachloro-m-xylene [2]	133	30-150		1/7/17 20:59

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-04C | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-15

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1221 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1232 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1242 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1248 [2]	1.6	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1254 [2]	3.1	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1260 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1262 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB
Aroclor-1268 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:17	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		1/7/17 21:17
Decachlorobiphenyl [2]	105	30-150		1/7/17 21:17
Tetrachloro-m-xylene [1]	85.5	30-150		1/7/17 21:17
Tetrachloro-m-xylene [2]	101	30-150		1/7/17 21:17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-04D | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-16

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1221 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1232 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1242 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1248 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1254 [1]	0.75	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1260 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1262 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB
Aroclor-1268 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 1:43	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.5	30-150		1/7/17 1:43
Decachlorobiphenyl [2]	71.5	30-150		1/7/17 1:43
Tetrachloro-m-xylene [1]	69.8	30-150		1/7/17 1:43
Tetrachloro-m-xylene [2]	70.3	30-150		1/7/17 1:43

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-05A | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-17

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1221 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1232 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1242 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1248 [1]	12	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1254 [1]	29	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1260 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1262 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB
Aroclor-1268 [1]	ND	4.3	mg/Kg	50		SW-846 8082A	1/5/17	1/7/17 21:34	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 21:34
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 21:34
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 21:34
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 21:34

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-05B | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-18

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1221 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1232 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1242 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1248 [2]	1.8	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1254 [1]	4.5	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1260 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1262 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB
Aroclor-1268 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 21:52	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.6	30-150		1/7/17 21:52
Decachlorobiphenyl [2]	83.8	30-150		1/7/17 21:52
Tetrachloro-m-xylene [1]	69.1	30-150		1/7/17 21:52
Tetrachloro-m-xylene [2]	85.1	30-150		1/7/17 21:52

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-05C | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-19

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1221 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1232 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1242 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1248 [2]	0.79	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1254 [2]	1.8	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1260 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1262 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB
Aroclor-1268 [1]	ND	0.41	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:10	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.2	30-150		1/7/17 22:10
Decachlorobiphenyl [2]	78.3	30-150		1/7/17 22:10
Tetrachloro-m-xylene [1]	65.8	30-150		1/7/17 22:10
Tetrachloro-m-xylene [2]	79.3	30-150		1/7/17 22:10

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1356

Date Received: 12/29/2016

Field Sample #: PCB-CC-05D | Sampled: 12/27/2016 00:00

Sample ID: 16L1356-20

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1221 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1232 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1242 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1248 [2]	0.59	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1254 [2]	1.4	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1260 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1262 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB
Aroclor-1268 [1]	ND	0.42	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:28	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.5	30-150		1/7/17 22:28
Decachlorobiphenyl [2]	85.5	30-150		1/7/17 22:28
Tetrachloro-m-xylene [1]	69.9	30-150		1/7/17 22:28
Tetrachloro-m-xylene [2]	83.9	30-150		1/7/17 22:28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16L1356-01 [PCB-CC-01A]	B167254	2.03	10.0	01/05/17
16L1356-02 [PCB-CC-01B]	B167254	2.14	10.0	01/05/17
16L1356-03 [PCB-CC-01C]	B167254	2.15	10.0	01/05/17
16L1356-04 [PCB-CC-01D]	B167254	2.30	10.0	01/05/17
16L1356-05 [PCB-CC-02A]	B167254	2.08	10.0	01/05/17
16L1356-06 [PCB-CC-02B]	B167254	2.48	10.0	01/05/17
16L1356-07 [PCB-CC-02C]	B167254	2.46	10.0	01/05/17
16L1356-08 [PCB-CC-02D]	B167254	2.25	10.0	01/05/17
16L1356-09 [PCB-CC-03A]	B167254	2.10	10.0	01/05/17
16L1356-10 [PCB-CC-03B]	B167254	2.03	10.0	01/05/17
16L1356-11 [PCB-CC-03C]	B167254	2.26	10.0	01/05/17
16L1356-12 [PCB-CC-03D]	B167254	2.15	10.0	01/05/17
16L1356-13 [PCB-CC-04A]	B167254	2.48	10.0	01/05/17
16L1356-14 [PCB-CC-04B]	B167254	2.06	10.0	01/05/17
16L1356-15 [PCB-CC-04C]	B167254	2.52	10.0	01/05/17
16L1356-16 [PCB-CC-04D]	B167254	2.31	10.0	01/05/17
16L1356-17 [PCB-CC-05A]	B167254	2.30	10.0	01/05/17
16L1356-18 [PCB-CC-05B]	B167254	2.18	10.0	01/05/17
16L1356-19 [PCB-CC-05C]	B167254	2.42	10.0	01/05/17
16L1356-20 [PCB-CC-05D]	B167254	2.38	10.0	01/05/17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B167254 - SW-846 3540C										
Blank (B167254-BLK1)				Prepared: 01/05/17 Analyzed: 01/06/17						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.807*		mg/Kg	1.00		80.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.742*		mg/Kg	1.00		74.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.669*		mg/Kg	1.00		66.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.655*		mg/Kg	1.00		65.5	30-150			
LCS (B167254-BS1)				Prepared: 01/05/17 Analyzed: 01/06/17						
Aroclor-1016	0.22	0.10	mg/Kg	0.250		88.2	40-140			
Aroclor-1016 [2C]	0.27	0.10	mg/Kg	0.250		109	40-140			
Aroclor-1260	0.24	0.10	mg/Kg	0.250		95.9	40-140			
Aroclor-1260 [2C]	0.26	0.10	mg/Kg	0.250		105	40-140			
Surrogate: Decachlorobiphenyl	*0.942*		mg/Kg	1.00		94.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.851*		mg/Kg	1.00		85.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.808*		mg/Kg	1.00		80.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.789*		mg/Kg	1.00		78.9	30-150			
LCS Dup (B167254-BSD1)				Prepared: 01/05/17 Analyzed: 01/06/17						
Aroclor-1016	0.22	0.10	mg/Kg	0.250		86.9	40-140	1.57	30	
Aroclor-1016 [2C]	0.27	0.10	mg/Kg	0.250		106	40-140	2.96	30	
Aroclor-1260	0.24	0.10	mg/Kg	0.250		94.2	40-140	1.82	30	
Aroclor-1260 [2C]	0.26	0.10	mg/Kg	0.250		103	40-140	1.62	30	
Surrogate: Decachlorobiphenyl	*0.907*		mg/Kg	1.00		90.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.817*		mg/Kg	1.00		81.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.792*		mg/Kg	1.00		79.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.769*		mg/Kg	1.00		76.9	30-150			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B167254 - SW-846 3540C											
Matrix Spike (B167254-MS1)	**Source: 16L1356-01**			Prepared: 01/05/17 Analyzed: 01/07/17							
Aroclor-1016	35	0.094	mg/Kg	0.236	ND	**14700**	*	40-140			MS-21
Aroclor-1016 [2C]	19	0.094	mg/Kg	0.236	ND	**8240**	*	40-140			MS-21
Aroclor-1260	100	0.094	mg/Kg	0.236	ND	**42200**	*	40-140			MS-21
Aroclor-1260 [2C]	68	0.094	mg/Kg	0.236	ND	**28700**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.741*		mg/Kg	0.943		78.5		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.588*		mg/Kg	0.943		62.3		30-150			
Surrogate: Tetrachloro-m-xylene	*0.629*		mg/Kg	0.943		66.6		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.617*		mg/Kg	0.943		65.4		30-150			
Matrix Spike Dup (B167254-MSD1)	**Source: 16L1356-01**			Prepared: 01/05/17 Analyzed: 01/07/17							
Aroclor-1016	31	0.093	mg/Kg	0.231	ND	**13300**	*	40-140	12.5	50	MS-21
Aroclor-1016 [2C]	18	0.093	mg/Kg	0.231	ND	**7590**	*	40-140	10.1	50	MS-21
Aroclor-1260	87	0.093	mg/Kg	0.231	ND	**37800**	*	40-140	12.9	50	MS-21
Aroclor-1260 [2C]	63	0.093	mg/Kg	0.231	ND	**27100**	*	40-140	7.46	50	MS-21
Surrogate: Decachlorobiphenyl	*0.635*		mg/Kg	0.926		68.6		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.522*		mg/Kg	0.926		56.4		30-150			
Surrogate: Tetrachloro-m-xylene	*0.554*		mg/Kg	0.926		59.9		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.540*		mg/Kg	0.926		58.3		30-150			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-01A

Lab Sample ID: 16L1356-01 Date(s) Analyzed: 01/08/2017 01/08/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	340	
	2	0.00	0.00	0.00	350	2.0
Aroclor-1254	1	0.00	0.00	0.00	630	
	2	0.00	0.00	0.00	690	8.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-01B

Lab Sample ID: 16L1356-02 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	210	
	2	0.00	0.00	0.00	220	3.2
Aroclor-1254	1	0.00	0.00	0.00	430	
	2	0.00	0.00	0.00	430	0.5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-01C

Lab Sample ID: 16L1356-03 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	75	
	2	0.00	0.00	0.00	76	1.3
Aroclor-1254	1	0.00	0.00	0.00	150	
	2	0.00	0.00	0.00	150	2.7

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-01D

Lab Sample ID: 16L1356-04 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	100	
	2	0.00	0.00	0.00	100	4.9
Aroclor-1254	1	0.00	0.00	0.00	210	
	2	0.00	0.00	0.00	200	3.0

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-02A

Lab Sample ID: 16L1356-05 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	29	
	2	0.00	0.00	0.00	31	6.7
Aroclor-1254	1	0.00	0.00	0.00	44	
	2	0.00	0.00	0.00	51	15.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-02B

Lab Sample ID: 16L1356-06 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	15	
	2	0.00	0.00	0.00	16	7.8
Aroclor-1254	1	0.00	0.00	0.00	26	
	2	0.00	0.00	0.00	29	12.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-02C

Lab Sample ID: 16L1356-07

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	1.2	
	2	0.00	0.00	0.00	1.3	10.5
Aroclor-1254	1	0.00	0.00	0.00	1.5	
	2	0.00	0.00	0.00	2.0	25.4

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-02D

Lab Sample ID: 16L1356-08 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	1.1	
	2	0.00	0.00	0.00	1.1	0.0
Aroclor-1254	1	0.00	0.00	0.00	1.3	
	2	0.00	0.00	0.00	1.4	11.3

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-03A

Lab Sample ID: 16L1356-09 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	6.0	
	2	0.00	0.00	0.00	6.3	5.0
Aroclor-1254	1	0.00	0.00	0.00	14	
	2	0.00	0.00	0.00	14	1.4

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-03B

Lab Sample ID: 16L1356-10

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	1.1	
	2	0.00	0.00	0.00	1.1	3.7
Aroclor-1254	1	0.00	0.00	0.00	2.3	
	2	0.00	0.00	0.00	2.4	5.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-03C

Lab Sample ID: 16L1356-11 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	0.97	
	2	0.00	0.00	0.00	1.0	2.7
Aroclor-1254	1	0.00	0.00	0.00	2.1	
	2	0.00	0.00	0.00	2.2	6.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-03D

Lab Sample ID: 16L1356-12 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.10	
	2	0.00	0.00	0.00	0.12	14.3

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-04A

Lab Sample ID: 16L1356-13 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	24	
	2	0.00	0.00	0.00	26	6.8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-04B

Lab Sample ID: 16L1356-14 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	6.1	
	2	0.00	0.00	0.00	6.6	7.4
Aroclor-1254	1	0.00	0.00	0.00	14	
	2	0.00	0.00	0.00	14	0.0

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-04C

Lab Sample ID: 16L1356-15 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	1.6	
	2	0.00	0.00	0.00	1.6	0.0
Aroclor-1254	1	0.00	0.00	0.00	3.0	
	2	0.00	0.00	0.00	3.1	4.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-04D

Lab Sample ID: 16L1356-16 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.75	
	2	0.00	0.00	0.00	0.72	3.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-05A

Lab Sample ID: 16L1356-17

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	12	
	2	0.00	0.00	0.00	12	1.7
Aroclor-1254	1	0.00	0.00	0.00	29	
	2	0.00	0.00	0.00	28	3.2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-05B

Lab Sample ID: 16L1356-18 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	1.8	
	2	0.00	0.00	0.00	1.8	2.3
Aroclor-1254	1	0.00	0.00	0.00	4.5	
	2	0.00	0.00	0.00	4.1	8.2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-05C

Lab Sample ID: 16L1356-19

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	0.74	
	2	0.00	0.00	0.00	0.79	7.1
Aroclor-1254	1	0.00	0.00	0.00	1.8	
	2	0.00	0.00	0.00	1.8	1.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-05D

Lab Sample ID: 16L1356-20 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1248	1	0.00	0.00	0.00	0.52	
	2	0.00	0.00	0.00	0.59	12.2
Aroclor-1254	1	0.00	0.00	0.00	1.3	
	2	0.00	0.00	0.00	1.4	5.1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B167254-BS1 Date(s) Analyzed: 01/06/2017 01/06/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.27	20
Aroclor-1260	1	0.00	0.00	0.00	0.24	
	2	0.00	0.00	0.00	0.26	8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B167254-BSD1 Date(s) Analyzed: 01/06/2017 01/06/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.27	22
Aroclor-1260	1	0.00	0.00	0.00	0.24	
	2	0.00	0.00	0.00	0.26	10

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B167254-MS1 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	35	
	2	0.00	0.00	0.00	19	59
Aroclor-1260	1	0.00	0.00	0.00	100	
	2	0.00	0.00	0.00	68	38

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B167254-MSD1 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	31	
	2	0.00	0.00	0.00	18	52
Aroclor-1260	1	0.00	0.00	0.00	87	
	2	0.00	0.00	0.00	63	33

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

http://www.contestlabs.com

Doc # 381 Rev 0 5 8 2015

EB H6L0 16L1356

CHAIN OF CUSTODY RECORD

Company Name:	ATC Group Services
Address:	171 Commerce Street, Williston, VT 05495
Phone:	802-862-1980
Project Name:	St, Johnsbury Armory
Project Location:	St. Johnsbury, VT
Project Number:	280BS00783
Project Manager:	Jesse Stratton
Con-Test Bid:	
Invoice Recipient:	eric.nehrbauer@atcassociates.com
Sampled By:	

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Other:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: jesse.stratton@atcassociates.com
Fax To #:

ANALYSIS REQUESTED

EPA 8082 - 35 PCB Subset

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code
01	PCB-CC-01A	12/27/2016			X	Concrete	G
02	PCB-CC-01B						
03	PCB-CC-01C						
04	PCB-CC-01D						
05	PCB-CC-02A						
06	PCB-CC-02B						
07	PCB-CC-02C						
08	PCB-CC-02D						
09	PCB-CC-03A						
10	PCB-CC-03B						

# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Comments: Concrete Core Samples
A - 0.0 - 0.25
B - 0.25 - 0.5
C - 0.5 - 1.0
D - 1.0 - 1.5
See SLD for Core locations

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil/Solid
SL = Sludge
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Relinquished by: (signature)	Date/Time: 12/27/16 1PM
Received by: (signature)	Date/Time: 12/29/16 9:05
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

Program Information

○ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required
PWSID # _____

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

16L1356

CHAIN OF CUSTODY RECORD

Company Name:	ATC Group Services
Address:	171 Commerce Street, Williston, VT 05495
Phone:	802-862-1980
Project Name:	St, Johnsbury Armory
Project Location:	St. Johnsbury, VT
Project Number:	280BS00783
Project Manager:	Jesse Stratton
Con-Test Bid:	
Invoice Recipient:	eric.nehrbauer@atcassociates.com
Sampled By:	

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Other:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: jesse.stratton@atcassociates.com
Fax To #:

ANALYSIS REQUESTED

EPA 8082 - $540 Schuler

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	EPA 8082 - $540 Schuler	# of Containers	[2] Preservation Code	[3] Container Code
11	PCB-CC-03C	12/27/16			X	Concrete	G	X			
12	PCB-CC-03D										
13	PCB-CC-04A										
14	PCB-CC-04B										
15	PCB-CC-04C										
16	PCB-CC-04D										
17	PCB-CC-05A										
18	PCB-CC-05B										
19	PCB-CC-05C										
20	PCB-CC-05D										

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil/Solid
SL = Sludge
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 12/27/16 1200
Received by: (signature) 4.4	Date/Time: 12/29/16 9:05
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

Program Information

○ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required
PWSID # _____

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: ATC **RECEIVED BY:** EB **DATE:** 12/29/16

1) **Was the chain(s) of custody relinquished and signed?** **Yes** ✓ **No** ____ **No COC Incl.**

2) **Does the chain agree with the samples?** **Yes** ✓ **No** ____
If not, explain:

3) **Are all the samples in good condition?** **Yes** ✓ **No** ____
If not, explain:

4) **How were the samples received:**

On Ice ✓ Direct from Sampling ____ Ambient ____ In Cooler(s) ✓

Were the samples received in Temperature Compliance of (2-6°C)? **Yes** ✓ **No** ____ **N/A** ____

Temperature °C by Temp blank ____ Temperature °C by Temp gun 4.4

5) **Are there Dissolved samples for the lab to filter?** **Yes** ____ **No** ✓
Who was notified ____ Date ____ Time ____

6) **Are there any RUSH or SHORT HOLDING TIME samples?** **Yes** ____ **No** ✓
Who was notified ____ Date ____ Time ____

7) **Location where samples are stored:** Log In

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** **Yes** ____ **No** ____ **N/A** ✓

9) **Do all samples have the proper Base pH:** **Yes** ____ **No** ____ **N/A** ✓

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** **Yes** ____ **N/A** ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic		2 oz amber/clear jar	36 20
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____ **Time and Date Frozen:**

Bisulfate ____ # DI Water ____

Thiosulfate ____ Unpreserved ____

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	4.4 with gun
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T N/A	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	N/A	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** EB **Date/Time:** 12/28/16 EB 9:05

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

January 10, 2017

Jesse Stratton
ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: 280BS00783
Laboratory Work Order Number: 16L1357

Enclosed are results of analyses for samples received by the laboratory on December 29, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

16L1357-01 6

16L1357-02 7

16L1357-03 8

16L1357-04 9

16L1357-05 10

16L1357-06 11

16L1357-07 12

16L1357-08 13

16L1357-09 14

16L1357-10 15

16L1357-11 16

16L1357-12 17

16L1357-13 18

16L1357-14 19

16L1357-15 20

16L1357-16 21

Sample Preparation Information 22

QC Data 23

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 23

B167256 23

Dual Column RPD Report 24

Flag/Qualifier Summary 42

Table of Contents (continued)

Certifications 43

Chain of Custody/Sample Receipt 44

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Vermont
171 Commerce Street, PO Box 1486
Williston, VT 05495
ATTN: Jesse Stratton

REPORT DATE: 1/10/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 280BS00783

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16L1357

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PCB-CC-06A	16L1357-01	Concrete		SW-846 8082A	
PCB-CC-06B	16L1357-02	Concrete		SW-846 8082A	
PCB-CC-06C	16L1357-03	Concrete		SW-846 8082A	
PCB-CC-06D	16L1357-04	Concrete		SW-846 8082A	
PCB-CC-07A	16L1357-05	Concrete		SW-846 8082A	
PCB-CC-07B	16L1357-06	Concrete		SW-846 8082A	
PCB-CC-07C	16L1357-07	Concrete		SW-846 8082A	
PCB-CC-07D	16L1357-08	Concrete		SW-846 8082A	
PCB-CC-08E	16L1357-09	Concrete		SW-846 8082A	
PCB-CC-09E	16L1357-10	Concrete		SW-846 8082A	
PCB-CC-10E	16L1357-11	Concrete		SW-846 8082A	
PCB-CC-11E	16L1357-12	Concrete		SW-846 8082A	
PCB-CC-12E	16L1357-13	Concrete		SW-846 8082A	
PCB-CC-13E	16L1357-14	Concrete		SW-846 8082A	
PCB-CC-14E	16L1357-15	Concrete		SW-846 8082A	
PCB-CC-05DD	16L1357-16	Concrete		SW-846 8082A	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

P-01

Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.

Analyte & Samples(s) Qualified:

Aroclor-1260 [2C]
16L1357-01[PCB-CC-06A], 16L1357-02[PCB-CC-06B]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16L1357-05[PCB-CC-07A], 16L1357-06[PCB-CC-07B], 16L1357-07[PCB-CC-07C], 16L1357-08[PCB-CC-07D], 16L1357-09[PCB-CC-08E]

Decachlorobiphenyl [2C]
16L1357-05[PCB-CC-07A], 16L1357-06[PCB-CC-07B], 16L1357-07[PCB-CC-07C], 16L1357-08[PCB-CC-07D], 16L1357-09[PCB-CC-08E]

Tetrachloro-m-xylene
16L1357-05[PCB-CC-07A], 16L1357-06[PCB-CC-07B], 16L1357-07[PCB-CC-07C], 16L1357-08[PCB-CC-07D], 16L1357-09[PCB-CC-08E]

Tetrachloro-m-xylene [2C]
16L1357-05[PCB-CC-07A], 16L1357-06[PCB-CC-07B], 16L1357-07[PCB-CC-07C], 16L1357-08[PCB-CC-07D], 16L1357-09[PCB-CC-08E]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-06A | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-01

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1221 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1232 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1242 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1248 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1254 [2]	12	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1260 [2]	2.8	1.7	mg/Kg	20	P-01	SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1262 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL
Aroclor-1268 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 19:06	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	104	30-150		1/7/17 19:06
Decachlorobiphenyl [2]	106	30-150		1/7/17 19:06
Tetrachloro-m-xylene [1]	92.9	30-150		1/7/17 19:06
Tetrachloro-m-xylene [2]	99.7	30-150		1/7/17 19:06

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-06B | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-02

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1221 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1232 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1242 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1248 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1254 [2]	3.2	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1260 [2]	0.69	0.40	mg/Kg	5	P-01	SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1262 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL
Aroclor-1268 [1]	ND	0.40	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 19:23	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	104	30-150		1/7/17 19:23
Decachlorobiphenyl [2]	102	30-150		1/7/17 19:23
Tetrachloro-m-xylene [1]	98.9	30-150		1/7/17 19:23
Tetrachloro-m-xylene [2]	107	30-150		1/7/17 19:23

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-06C | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-03

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1221 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1232 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1242 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1248 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1254 [1]	0.40	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1260 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1262 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL
Aroclor-1268 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:20	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	100	30-150		1/7/17	0:20
Decachlorobiphenyl [2]	84.5	30-150		1/7/17	0:20
Tetrachloro-m-xylene [1]	86.8	30-150		1/7/17	0:20
Tetrachloro-m-xylene [2]	76.0	30-150		1/7/17	0:20

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-06D | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-04

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1221 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1232 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1242 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1248 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1254 [1]	0.87	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1260 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1262 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL
Aroclor-1268 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	1/5/17	1/7/17 0:38	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	88.2	30-150		1/7/17 0:38	
Decachlorobiphenyl [2]	75.2	30-150		1/7/17 0:38	
Tetrachloro-m-xylene [1]	79.5	30-150		1/7/17 0:38	
Tetrachloro-m-xylene [2]	68.3	30-150		1/7/17 0:38	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-07A | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-05

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1221 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1232 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1242 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1248 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1254 [2]	82	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1260 [2]	24	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1262 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL
Aroclor-1268 [1]	ND	17	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 19:41	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 19:41
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 19:41
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 19:41
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 19:41

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-07B | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-06

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1221 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1232 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1242 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1248 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1254 [2]	45	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1260 [2]	13	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1262 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL
Aroclor-1268 [1]	ND	8.3	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 19:59	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 19:59
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 19:59
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 19:59
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 19:59

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-07C | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-07

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1221 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1232 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1242 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1248 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1254 [2]	36	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1260 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1262 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL
Aroclor-1268 [1]	ND	9.2	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:17	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 20:17
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 20:17
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 20:17
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 20:17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-07D | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-08

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1221 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1232 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1242 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1248 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1254 [2]	41	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1260 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1262 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL
Aroclor-1268 [1]	ND	9.1	mg/Kg	100		SW-846 8082A	1/5/17	1/7/17 20:35	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 20:35
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 20:35
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 20:35
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 20:35

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-08E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-09

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1221 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1232 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1242 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1248 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1254 [2]	180	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1260 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1262 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL
Aroclor-1268 [1]	ND	18	mg/Kg	200		SW-846 8082A	1/5/17	1/7/17 20:52	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	1/7/17 20:52
Decachlorobiphenyl [2]	*	30-150	S-01	1/7/17 20:52
Tetrachloro-m-xylene [1]	*	30-150	S-01	1/7/17 20:52
Tetrachloro-m-xylene [2]	*	30-150	S-01	1/7/17 20:52

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-09E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-10

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1221 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1232 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1242 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1248 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1254 [2]	1.6	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1260 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1262 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL
Aroclor-1268 [1]	ND	0.18	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 21:10	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.1	30-150		1/7/17 21:10
Decachlorobiphenyl [2]	91.0	30-150		1/7/17 21:10
Tetrachloro-m-xylene [1]	92.7	30-150		1/7/17 21:10
Tetrachloro-m-xylene [2]	101	30-150		1/7/17 21:10

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-10E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-11

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1221 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1232 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1242 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1248 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1254 [2]	7.0	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1260 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1262 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL
Aroclor-1268 [1]	ND	0.82	mg/Kg	10		SW-846 8082A	1/5/17	1/7/17 22:22	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.9	30-150		1/7/17 22:22
Decachlorobiphenyl [2]	88.1	30-150		1/7/17 22:22
Tetrachloro-m-xylene [1]	87.7	30-150		1/7/17 22:22
Tetrachloro-m-xylene [2]	94.7	30-150		1/7/17 22:22

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-11E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-12

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1221 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1232 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1242 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1248 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1254 [2]	4.3	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1260 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1262 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL
Aroclor-1268 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 22:34	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	113	30-150		1/7/17 22:34
Decachlorobiphenyl [2]	112	30-150		1/7/17 22:34
Tetrachloro-m-xylene [1]	115	30-150		1/7/17 22:34
Tetrachloro-m-xylene [2]	123	30-150		1/7/17 22:34

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-12E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-13

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1221 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1232 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1242 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1248 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1254 [2]	14	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1260 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1262 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL
Aroclor-1268 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 22:52	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.8	30-150		1/7/17 22:52
Decachlorobiphenyl [2]	99.4	30-150		1/7/17 22:52
Tetrachloro-m-xylene [1]	90.7	30-150		1/7/17 22:52
Tetrachloro-m-xylene [2]	97.7	30-150		1/7/17 22:52

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-13E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-14

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1221 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1232 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1242 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1248 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1254 [2]	16	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1260 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1262 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL
Aroclor-1268 [1]	ND	1.8	mg/Kg	20		SW-846 8082A	1/5/17	1/7/17 23:10	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	110	30-150		1/7/17 23:10
Decachlorobiphenyl [2]	112	30-150		1/7/17 23:10
Tetrachloro-m-xylene [1]	105	30-150		1/7/17 23:10
Tetrachloro-m-xylene [2]	113	30-150		1/7/17 23:10

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-14E | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-15

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1221 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1232 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1242 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1248 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1254 [2]	1.9	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1260 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1262 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL
Aroclor-1268 [1]	ND	0.38	mg/Kg	5		SW-846 8082A	1/5/17	1/7/17 23:28	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		1/7/17 23:28
Decachlorobiphenyl [2]	98.8	30-150		1/7/17 23:28
Tetrachloro-m-xylene [1]	101	30-150		1/7/17 23:28
Tetrachloro-m-xylene [2]	109	30-150		1/7/17 23:28

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 16L1357

Date Received: 12/29/2016

Field Sample #: PCB-CC-05DD | Sampled: 12/27/2016 16:39

Sample ID: 16L1357-16

Sample Matrix: Concrete

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1221 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1232 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1242 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1248 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1254 [2]	1.3	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1260 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1262 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL
Aroclor-1268 [1]	ND	0.15	mg/Kg	2		SW-846 8082A	1/5/17	1/7/17 23:45	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.6	30-150		1/7/17 23:45
Decachlorobiphenyl [2]	80.1	30-150		1/7/17 23:45
Tetrachloro-m-xylene [1]	79.1	30-150		1/7/17 23:45
Tetrachloro-m-xylene [2]	85.8	30-150		1/7/17 23:45

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16L1357-01 [PCB-CC-06A]	B167256	2.42	10.0	01/05/17
16L1357-02 [PCB-CC-06B]	B167256	2.49	10.0	01/05/17
16L1357-03 [PCB-CC-06C]	B167256	2.26	10.0	01/05/17
16L1357-04 [PCB-CC-06D]	B167256	2.03	10.0	01/05/17
16L1357-05 [PCB-CC-07A]	B167256	2.31	10.0	01/05/17
16L1357-06 [PCB-CC-07B]	B167256	2.42	10.0	01/05/17
16L1357-07 [PCB-CC-07C]	B167256	2.17	10.0	01/05/17
16L1357-08 [PCB-CC-07D]	B167256	2.19	10.0	01/05/17
16L1357-09 [PCB-CC-08E]	B167256	2.28	10.0	01/05/17
16L1357-10 [PCB-CC-09E]	B167256	2.26	10.0	01/05/17
16L1357-11 [PCB-CC-10E]	B167256	2.44	10.0	01/05/17
16L1357-12 [PCB-CC-11E]	B167256	2.08	10.0	01/05/17
16L1357-13 [PCB-CC-12E]	B167256	2.26	10.0	01/05/17
16L1357-14 [PCB-CC-13E]	B167256	2.21	10.0	01/05/17
16L1357-15 [PCB-CC-14E]	B167256	2.65	10.0	01/05/17
16L1357-16 [PCB-CC-05DD]	B167256	2.60	10.0	01/05/17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B167256 - SW-846 3540C										
Blank (B167256-BLK1)				Prepared: 01/05/17 Analyzed: 01/06/17						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.970*		mg/Kg	1.00		97.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.820*		mg/Kg	1.00		82.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.854*		mg/Kg	1.00		85.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.712*		mg/Kg	1.00		71.2	30-150			
LCS (B167256-BS1)				Prepared: 01/05/17 Analyzed: 01/06/17						
Aroclor-1016	0.24	0.10	mg/Kg	0.250		94.4	40-140			
Aroclor-1016 [2C]	0.25	0.10	mg/Kg	0.250		101	40-140			
Aroclor-1260	0.23	0.10	mg/Kg	0.250		92.2	40-140			
Aroclor-1260 [2C]	0.22	0.10	mg/Kg	0.250		86.8	40-140			
Surrogate: Decachlorobiphenyl	*0.997*		mg/Kg	1.00		99.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.850*		mg/Kg	1.00		85.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.902*		mg/Kg	1.00		90.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.748*		mg/Kg	1.00		74.8	30-150			
LCS Dup (B167256-BSD1)				Prepared: 01/05/17 Analyzed: 01/06/17						
Aroclor-1016	0.24	0.10	mg/Kg	0.250		97.4	40-140	3.07	30	
Aroclor-1016 [2C]	0.25	0.10	mg/Kg	0.250		98.5	40-140	2.18	30	
Aroclor-1260	0.23	0.10	mg/Kg	0.250		93.9	40-140	1.88	30	
Aroclor-1260 [2C]	0.22	0.10	mg/Kg	0.250		90.0	40-140	3.55	30	
Surrogate: Decachlorobiphenyl	*0.996*		mg/Kg	1.00		99.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.849*		mg/Kg	1.00		84.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.921*		mg/Kg	1.00		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.763*		mg/Kg	1.00		76.3	30-150			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-06A

Lab Sample ID: 16L1357-01 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	11	
	2	0.00	0.00	0.00	12	6.0
Aroclor-1260	1	0.00	0.00	0.00	1.8	
	2	0.00	0.00	0.00	2.8	43.0

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-06B

Lab Sample ID: 16L1357-02 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	2.9	
	2	0.00	0.00	0.00	3.2	9.5
Aroclor-1260	1	0.00	0.00	0.00	0.46	
	2	0.00	0.00	0.00	0.69	40.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-06C

Lab Sample ID: 16L1357-03 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.40	
	2	0.00	0.00	0.00	0.37	6.8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-06D

Lab Sample ID: 16L1357-04 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	0.87	
	2	0.00	0.00	0.00	0.81	7.5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-07A

Lab Sample ID: 16L1357-05

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	76	
	2	0.00	0.00	0.00	82	7.6
Aroclor-1260	1	0.00	0.00	0.00	22	
	2	0.00	0.00	0.00	24	9.2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-07B

Lab Sample ID: 16L1357-06 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	42	
	2	0.00	0.00	0.00	45	7.1
Aroclor-1260	1	0.00	0.00	0.00	12	
	2	0.00	0.00	0.00	13	8.0

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-07C

Lab Sample ID: 16L1357-07 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	33	
	2	0.00	0.00	0.00	36	9.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-07D

Lab Sample ID: 16L1357-08 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	37	
	2	0.00	0.00	0.00	41	10.5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-08E

Lab Sample ID: 16L1357-09 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	170	
	2	0.00	0.00	0.00	180	6.9

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-09E

Lab Sample ID: 16L1357-10 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	1.4	
	2	0.00	0.00	0.00	1.6	11.2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-10E

Lab Sample ID: 16L1357-11

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	6.4	
	2	0.00	0.00	0.00	7.0	8.6

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-11E

Lab Sample ID: 16L1357-12 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	3.9	
	2	0.00	0.00	0.00	4.3	10.5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-12E

Lab Sample ID: 16L1357-13

Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	13	
	2	0.00	0.00	0.00	14	9.0

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-13E

Lab Sample ID: 16L1357-14 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	15	
	2	0.00	0.00	0.00	16	8.5

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-14E

Lab Sample ID: 16L1357-15 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	1.7	
	2	0.00	0.00	0.00	1.9	8.2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PCB-CC-05DD

Lab Sample ID: 16L1357-16 Date(s) Analyzed: 01/07/2017 01/07/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	0.00	0.00	1.2	
	2	0.00	0.00	0.00	1.3	8.8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B167256-BS1 Date(s) Analyzed: 01/06/2017 01/06/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.24	
	2	0.00	0.00	0.00	0.25	6
Aroclor-1260	1	0.00	0.00	0.00	0.23	
	2	0.00	0.00	0.00	0.22	4

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B167256-BSD1 Date(s) Analyzed: 01/06/2017 01/06/2017

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.24	
	2	0.00	0.00	0.00	0.25	3
Aroclor-1260	1	0.00	0.00	0.00	0.23	
	2	0.00	0.00	0.00	0.22	7

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

P-01	Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

16L1357 EB
~~16L1356~~

http://www.contestlabs.com

Doc # 381 Rev 0 5 8 2015

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name:	ATC Group Services
Address:	171 Commerce Street, Williston, VT 05495
Phone:	802-862-1980
Project Name:	St, Johnsbury Armory
Project Location:	St. Johnsbury, VT
Project Number:	280BS00783
Project Manager:	Jesse Stratton
Con-Test Bid:	
Invoice Recipient:	eric.nehrbauer@atcassociates.com
Sampled By:	

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Other:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: jesse.stratton@atcassociates.com
Fax To #:

ANALYSIS REQUESTED

EPA 8082-35+C Soxhlet

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code
~~2~~701	PCB-CC-06A	12/27/16			X	Soil	G
~~2~~702	PCB-CC-06B						
~~2~~303	PCB-CC-06C						
~~2~~704	PCB-CC-06D						
~~2~~505	PCB-CC-07A						
~~2~~006	PCB-CC-07B						
~~2~~707	PCB-CC-07C						
~~2~~508	PCB-CC-07D						
~~2~~409	PCB-CC-08E						
~~5~~010	PCB-CC-09F						

# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil/Solid
SL = Sludge
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 12/27/16 1:50
Received by: (signature) 4.4	Date/Time: 12/29/16 9:05
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

Program Information

○ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required
PWSID # _____

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

16L1357 EB
16L1356

http://www.contestlabs.com

Doc # 381 Rev 0 5 8 2015

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name:	ATC Group Services
Address:	171 Commerce Street, Williston, VT 05495
Phone:	802-862-1980
Project Name:	St, Johnsbury Armory
Project Location:	St. Johnsbury, VT
Project Number:	280BS00783
Project Manager:	Jesse Stratton
Con-Test Bid:	
Invoice Recipient:	eric.nehrbauer@atcassociates.com
Sampled By:	

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Other:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: jesse.stratton@atcassociates.com
Fax To #:

ANALYSIS REQUESTED

EPA 8082 - 35 °C Soxhlet

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1] Matrix Code	Conc Code	# of Containers	[2] Preservation Code	[3] Container Code
11	PCB-CC-10E	12/27/16			X	Soil	G			
12	PCB-CC-11E	↓			↓	↓	↓			
13	PCB-CC-12E									
14	PCB-CC-13E									
15	PCB-CC-14E	↓			↓	↓	↓			
16	PCB-CC-05DD	↓			↓	→	→			

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil/Solid
SL = Sludge
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 12/27/16 1100	
Received by: (signature) 4.4	Date/Time: 12/29/16 9:05	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Program Information

○ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required
PWSID # _____

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: ATC **RECEIVED BY:** EB **DATE:** 12/29/16

1) **Was the chain(s) of custody relinquished and signed?** **Yes** ✓ **No** ____ **No COC Incl.**

2) **Does the chain agree with the samples?** **Yes** ✓ **No** ____
If not, explain:

3) **Are all the samples in good condition?** **Yes** ✓ **No** ____
If not, explain:

4) **How were the samples received:**
On Ice ✓ Direct from Sampling ____ Ambient ____ In Cooler(s) ✓

Were the samples received in Temperature Compliance of (2-6°C)? **Yes** ✓ **No** ____ **N/A** ____

Temperature °C by Temp blank ____ Temperature °C by Temp gun 4.4

5) **Are there Dissolved samples for the lab to filter?** **Yes** ____ **No** ✓
Who was notified ____ Date ____ Time ____

6) **Are there any RUSH or SHORT HOLDING TIME samples?** **Yes** ____ **No** ✓
Who was notified ____ Date ____ Time ____

7) **Location where samples are stored:** Log In

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** **Yes** ____ **No** ____ **N/A** ✓

9) **Do all samples have the proper Base pH:** **Yes** ____ **No** ____ **N/A** ✓

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** **Yes** ____ **N/A** ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic		2 oz amber/clear jar	16
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	4.4 with gun
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	N/A	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** EB **Date/Time:** 12/29/16 9:05

DRAFT TARGETED BROWNFIELDS ASSESSMENT REPORT

FORMER ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

Prepared For:
U.S. Environmental Protection Agency (EPA)
Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

EPA CONTRACT NO. EP-S1-17-01
TDD NO. BR-01-20-06-0001

Submitted By:
KGSNE, LLC
293 Boston Post Road, West, Suite 100
Marlborough, MA 01752

Submittal Date: March 9, 2021

EPA Region I
Reviewed and Approved:

Contracting Officer's Representative (COR) — Date

Region I START
Reviewed and Approved:



Alyssa Epstein
Project Scientist — March 9, 2021 Date



Clarence "Tim" Andrews
Project Manager — March 9, 2021 Date

KGSNE

TABLE OF CONTENTS
TARGETED BROWNFIELDS ASSESSMENT REPORT
FORMER ST. JOHNSBURY ARMORY
1249 MAIN STREET, ST. JOHNSBURY, VERMONT

SECTION			PAGE
1.0	**INTRODUCTION**		**1**
	1.1	Key Team Members	1
	1.2	Site Background	2
	1.3	Contaminants of Concern	2
	1.4	Document Review	2
2.0	**TBA SITE INVESTIGATION ACTIVITIES**		**2**
	2.1	Asbestos Containing Materials (ACM)	3
	2.2	Lead Based Paint (LBP)	4
	2.3	Polychlorinated Biphenyls (PCBs)	5
	2.4	Hazardous/Regulated Materials	6
	2.5	Mold	6
	2.6	Survey Limitations	7
3.0	**CONCLUSIONS AND RECOMMENDATIONS**		**8**
	3.1	ACM	8
	3.2	LBP	8
	3.3	PCBs	9
	3.4	Hazardous Materials Inventory	11
	3.5	Mold	11
	3.6	Abatement Costing	12
4.0	**DATA USABILITY AND VALIDATION**		**13**
5.0	**REFERENCES**		**13**

TABLES

NUMBER	
1	Summary of Positive Asbestos Analytical Results
2	Summary of Negative Asbestos Analytical Results
3	Summary of Positive Lead Based Paint Screening Results
4	Summary of PCB Analytical Results
5	Hazardous/Regulated Materials Inventory
6	Summary of Mold Swab Analytical Results
7	Summary of Mold Air Analytical Results
8	Abatement Cost Estimate

TABLE OF CONTENTS (cont.)
TARGETED BROWNFIELDS ASSESSMENT REPORT
FORMER ST. JOHNSBURY ARMORY
1249 MAIN STREET, ST. JOHNSBURY, VERMONT

FIGURES

NUMBER

1 Site Locus
2A Basement Layout with Sample Data
2B First Floor Layout with Sample Data
2C Second Floor Layout with Sample Data

APPENDICIES

NUMBER

A Environmental Survey, ATC March 28, 2013
B Site Photographs
C Asbestos Analytical Report
D Lead Inspection Report
E PCB Analytical Report
F Mold Analytical Report
G Limitations
H Data Validation Memo

1.0 INTRODUCTION

This Targeted Brownfields Assessment (TBA) Report was prepared by KGSNE JV, LLC (KGSNE) for the United States Environmental Protection Agency (EPA) under contract EP-S1-17-01, Task Order No. 68HE0119F0009, Technical Direction Document No. BR-01-20-06-0001. This TBA Report documents the Hazardous Materials Building Survey (HBMS) conducted at the Former Armory Building located at 129 Main Street in St. Johnsbury, Vermont. A Site Locus Map is included as Figure 1.

The objective of this investigation is to identify hazardous building materials, mold, and regulated materials/universal wastes within the building. These results will be used to evaluate potential remedial actions and associated abatement costs. For this investigation, the entire building represents the sole Area of Concern (AOC).

KGSNE conducted Site activities and prepared this TBA Report in accordance with the EPA-approved Site-Specific Quality Assurance Project Plan Addendum (SSQAPPA) as prepared by KGSNE, (September 2, 2020). The TBA activities included surveys and sampling to locate, quantify, or otherwise determine the presence of the following:

- Asbestos containing materials (ACMs);
- Lead-based paint (LBP);
- Polychlorinated biphenyls (PCBs) in bulk building materials;
- Hazardous/regulated materials/universal wastes (survey only, no sampling); and
- Mold/fungi.

1.1 Key Team Members

Jim Byrne is the EPA Task Order Project Officer (TOPO). The Brownfield Grantee is the Town of St. Johnsbury. Tim Andrews managed KGSNE and subcontractor tasks, and Gary Glennon coordinated with the analytical laboratories and managed data review activities. Josh Stewart implemented field activities as the Field Operations Leader (FOL).

EMSL Analytical, Inc. (EMSL) located in Woburn, Massachusetts, performed the asbestos analysis. Eastern Analytical, Inc. (EAI) performed the PCB Analysis. The mold sampling and analysis was performed by Environmental Compliance Associates, LLC (ECA). Lead-Based Paint

(LBP) testing was performed by Vermont-licensed Lead Inspector/Risk Assessor John Madigan with KD Associates.

1.2 Site Background

The Former Armory building is a 2-story 5,600 (+/-) square foot building that was constructed in 1916. The building has served as an armory, gymnasium, and meeting house over the years. The building has remained vacant and unconditioned for several years, leading to extensive mold growth and damage to various building materials. The building floorplans are included as Figures 2A through 2C.

1.3 Contaminants of Concern

Potential contaminants of concern (COCs) in building materials include asbestos, lead paint, PCBs, and mold.

1.4 Document Review

KGSNE reviewed the Environmental Survey report completed by ATC on March 28, 2013 to determine which materials have been previously sampled and identified as ACM. A Copy of the report is included as Appendix A. KGSNE sampled additional materials that were suspect as ACM to adequately characterize the building in preparation for demolition activities to comply with EPA NESHAP and the Vermont Regulations for Asbestos Control (VRAC).

2.0 TBA SITE INVESTIGATION ACTIVITIES

KGSNE performed the hazardous building materials survey on February 2, 2021 and February 3, 2021. Christopher Clement, CIH (Vermont-licensed Asbestos Site Inspector #MP032436) performed the asbestos and mold surveys and sampling. Josh Stewart performed the hazardous material (HM) inventory and PCB sampling. John Madigan (Vermont-licensed Lead Inspector), with KD Associates, was subcontracted by KGSNE to conduct the United States Occupational Safety and Health Administration (OSHA) pre-demolition LBP survey on February 2, 2021.

A floor plan depicting the building layout and assigned room numbers is included as Figures 2A through 2C. Photographs from the survey are included as Appendix B. Inspection findings are presented in the following sections.

2.1 Asbestos Containing Materials (ACM)

State and federal regulations require that inspectors collect multiple samples from homogeneous areas to identify asbestos content in suspect ACM. Homogeneous areas consist of areas that appear to be similar in material color, texture, and date of installation or application. KGSNE collected 45 samples of suspect ACM for laboratory analysis to characterize building materials in identified homogeneous areas.

Previous analytical testing identified plaster walls and ceilings, AirCell pipe insulation and mudded joint fittings as ACM. These materials were not resampled by KGSNE during this assessment. Bulk samples that tested positive for the presence of asbestos are presented in Table 1. Bulk samples that returned negative results for the presence of asbestos are presented in Table 2.

Bulk samples were transmitted under a chain-of-custody to EMSL Analytical, Inc., an accredited Vermont-certified laboratory located at 5 Constitution Way, Unit A in Woburn, Massachusetts. Samples were analyzed by polarized light microscopy (PLM) in accordance with the EPA “Method for Determination of Asbestos in Bulk Material”; EPA/600/R-93/116 (July 1993). Laboratory analytical data for asbestos sampling is included as Appendix C.

Bulk samples collected from each homogeneous area were analyzed using the “hit-stop” procedure. Per this procedure, additional analysis of duplicate samples collected from identical homogeneous areas is not required if asbestos is detected in any one of the samples from the homogeneous group. A total of 45 bulk samples of suspect ACM were analyzed by PLM during this sampling event (no samples were omitted by the hit-stop procedure).

The PLM analysis method sometimes has difficulty identifying asbestos in non-organically bound (NOB) materials (floor tile, caulking, roof tar) since the opaque material binder can impede visual estimation of fibers. Transmission Electron Microscope (TEM) analysis is often used to confirm analytical results of NOB materials that tested negative for asbestos by the PLM analytical

method. KGSNE submitted 7 samples of NOB materials for TEM analysis to confirm PLM analytical results. Asbestos was not detected in the samples submitted for TEM analysis.

In addition, the following materials are assumed to contain asbestos:

- Any foundation damp proofing encountered below ground surface during demolition.
- Any lining or insulation materials identified behind the brick façade.
- Boiler internals (interior gaskets and insulation).

Additional limitations are presented in Section 2.6 below. Assumed ACM should be abated as ACM or tested when demolition allows for sampling and access to materials.

2.2 Lead Based Paint (LBP)

Vermont Lead Inspector John Madigan performed an OSHA pre-demolition lead survey on interior and exterior painted building components to identify materials that contain LBP. This LBP determination was conducted using X-ray Fluorescence (XRF) that non-destructively tests building components for the presence of lead.

Lead screening results are used to calculate worker exposure levels for OSHA compliance and to assess lead levels for proper handling and disposal of building materials during demolition or renovation. Screening results also provide an indication of the concentration of lead likely to be present in the abatement/demolition waste stream and identify lead concentrations with regards to future occupant safety. The lead-based paint survey was based on EPA protocols and United States Department of Housing and Urban Development (HUD) guidance and acceptable practices adopted for inspecting for LBP.

Building components returning results greater than 1.0 mg/cm^2 include all window components, stair risers, concrete floor paint, brick walls and ceilings, metal doors and ceilings, plaster walls, wood columns, and wood porch trim. Refer to Table 3 for positive LBP screening results. The Lead Inspection Report is included in Appendix D.

Per EPA and HUD regulations, LBP is present on any surface containing lead equal to or greater than 1.0 milligrams per square centimeter (mg/cm^2); however, the OSHA Lead Construction Standard,

Chapter 29, Section 1926.62 of the Code of Federal Regulations (29 CFR 1926.62) regulates worker exposure at any lead concentration. Based on current OSHA regulations, any painted surfaces containing lead at levels above 0.0 mg/cm^2 that will be disturbed during demolition activities must be handled as lead containing/LBP.

2.3 Polychlorinated Biphenyls (PCBs)

KGSNE collected five (5) samples of building materials laboratory analysis of PCBs. The materials sampled included floor paper, tar, and paint. Sampling was performed by removing a minimum of 10 grams of suspected PCB-containing media from building components to accurately determine the concentration of PCBs. Eastern Analytical Inc. (EAI) in Concord, New Hampshire analyzed PCB samples by SW-846 Method 8082 using the Soxhlet extraction method (SW-846 3540C).

Gym floor paper, hardwood subfloor paper, light pink paint, and light blue paint were identified to contain levels of PCBs at concentrations above the Toxic Substances Control Act (TSCA) cleanup standard of 1.0 ppm for high occupancy areas. Additionally, samples collected by ATC in 2013 indicated grey door caulking, white window caulking, white wall paint, and blue floor paint were also detected above the TSCA cleanup standard of 1.0 ppm for high occupancy areas.

Building materials with total PCB concentrations greater than 50 ppm present in a high occupancy use area must be removed and disposed of as a TSCA regulated PCB waste. Grey floor paint sampled by ATC was detected at a concentration of 5,700 ppm, which exceeds the 50-ppm limit. This material will require EPA notification, and removal and disposal will need to be performed in general accordance with TSCA regulated waste.

Table 4 summarizes PCB analytical results. PCB analytical laboratory reports are included as Appendix E.

In addition, fluorescent light ballasts may contain PCB oils. KGSNE observed PCB-containing light ballasts and other ballasts labeled with a “no-PCBs” designation during the HM inventory. Therefore, hazardous materials removal contractors should consult labels on each fluorescent light ballast during removal to confirm if ballasts contain PCBs. The fluorescent light ballast tally is included in the HM survey results section below.

2.4 Hazardous/Regulated Materials

KGSNE surveyed the building for regulated materials, universal waste, and miscellaneous hazardous materials. Hazardous/regulated materials encountered during the survey include fluorescent light tubes, fluorescent light ballasts, standalone lead acid batteries and in emergency lights and exit signs, fire extinguishers, refrigerator/freezer, and microwave. The hazardous materials inventory is presented in Table 5.

Additional hazardous materials (oils, gaskets, packing, insulation, mercury switches, etc.) may be located inside equipment, components, controls, and switches. If needed, a qualified technician should dismantle equipment and remove internal hazardous materials prior to component disposal.

2.5 Mold

ECA collected 9 spore trap air samples and 10 surface samples using tape-lift method from various surfaces throughout the building. Spore Trap Samples were collected onto Micro5™ spore trap cassettes. The samples were collected using high flow sampling pumps. In general, air is sampled at a rate of 5 liters per minute (lpm) through the Micro5™ cassettes for 5 minutes, totaling 25 liters. Upon receipt by the laboratory, the slide is removed from the cassette for the enumeration and identification of fungal spores. The deposition trace is analyzed at 400-800X magnification using Kohler Illumination.

Surface samples are collected by adhering a strip of clean, invisible tape directly to a surface/substrate and mounting it on a standard microscope slide for direct microscopic examination. Surface samples are helpful in determining what types of mold are present, whether growth is occurring on seemingly clean surfaces, and the extent of contamination of interior substrates.

Because of the ubiquity of fungi, samples collected from suspect areas need to be evaluated against samples collected from the outdoors and non-suspect areas for comparison. In general, the genus of fungi collected from the indoor air should be like those found outdoors and should contain similar concentrations. Significantly higher concentrations of fungi of different genera can indicate a mold problem in the indoor environment.

EPA has not set standards or threshold limit values for mold since fungal spores are ubiquitous and mold background levels vary greatly by region, season, and location. In addition, mold health

hazards and mold sensitivity vary with mold types, exposure levels, and the susceptibility an individual (i.e., genetic predisposition, age, pre-existing medical conditions, etc.), often making it difficult to identify dose/response relationships that are required to establish “safe” or “unsafe” levels (i.e., permissible exposure limits).

Laboratory analysis identified several mold and fungal species of varying concentrations including aspergills/penicillium, basidiospores, Cladosporium, Chaetomium, and Stachybotrys. Mold surface sample results are summarized on Table 6 and mold air sampling results are summarized on Table 7. The mold analytical report is included in Appendix F.

2.6 Survey Limitations

This report is subject to the limitations included in Appendix G. In addition, the following limitations were encountered during the inspection due to the condition of the on-site building or for other safety reasons:

- KGSNE attempted to characterize all building materials in the inspection area; however, it is impractical and costly to sample all materials in all areas. Inspection regulations are based on representative sampling. KGSNE collected representative samples from suspect asbestos and PCB-containing materials observed throughout the building.

- KGSNE did not observe foundation damp proofing on concrete foundations during the inspection; however, it was beyond the scope to core through pavement abutting the building or excavate soil adjacent to foundations.

- Building supplies and specialized equipment (cleaning agents, building materials, viable equipment, etc.) are not included in the hazardous waste inventory as these items are likely to be retained/relocated prior to renovation.

- Additional sampling or analysis of air, soil, water, or any other regulated or hazardous materials was beyond the scope of the HBMS.

3.0 CONCLUSIONS AND RECOMMENDATIONS

KGSNE completed the hazardous materials survey on February 2 and 3, 2021. The objective was to identify building materials containing ACM, LBP, and PCBs, and to inventory universal and/or regulated wastes to determine safety, abatement, and disposal requirements prior to renovation and/or demolition activities.

3.1 ACM

Materials identified as ACM are presented in Table 1 and include plaster walls and ceilings, AirCell pipe insulation and mudded joint fittings. Bulk samples that returned negative results for the presence of asbestos are presented in Table 2.

Asbestos abatement must be conducted in accordance with the Vermont Department of Health VSA Title 18, Chapter 26, Vermont Regulations for Asbestos Control.

Abatement activities must be conducted in accordance with Federal, State, and local regulations and protocols, and by a certified asbestos abatement contractor. A Vermont-certified Asbestos Project Monitor must provide abatement oversight, background/ambient air sampling, a final visual inspection, and final clearance air sampling during and at the completion of abatement activities.

3.2 LBP

Building components returning results greater than 1.0 mg/cm^2 are presented in Table 3 and include all window components, stair risers, concrete floor paint, brick walls and ceilings, metal doors and ceilings, plaster walls, wood columns, and wood porch trim.

LBP demolition/renovation is required to be performed by a contractor in compliance with the OSHA Rules for Occupational Health and Environmental Controls for Lead 29 CFR 1926.62, including implementation of a written worker protection program, personal air monitoring, and respiratory protection program.

Although EPA has established a 1.0 mg/cm^2 (0.5% by dry weight) threshold value for dangerous levels of lead, OSHA has not. The OSHA Lead Standard has no set limit for LBP concentrations

below which the standards do not apply (i.e. – OSHA considers any paint with detectable lead concentrations to be LBP).

If contractors are working with any levels of LBP, they must comply with exposure assessment criteria, worker protection, and other regulatory requirements until air sampling or historical data proves otherwise, regardless of concentration. LBP abatement may be required prior to working with, dismantling, or otherwise handling materials coated with LBP. A phased demolition plan could be implemented based on project specifications to save costs and possibly eliminate LBP abatement requirements.

During demolition, representative samples of LBP waste generated should be collected for toxicity characteristic leaching procedure (TCLP) lead analysis in accordance with 40 CFR Part 261 prior to material disposal. Under the Resource Conservation and Recovery Act (RCRA), the “acceptable” level of lead (i.e., not hazardous waste) in demolition debris is 5 milligrams per liter (mg/L) by TCLP. If demolition debris exceeds 5 mg/L of lead by TCLP, it must be disposed of as hazardous waste. Sampling and TCLP analysis of materials with low to mid-range XRF results may be used to establish lower limits under which materials can be disposed of as non-hazardous waste. If metal building components are to be recycled, lead abatement may not be necessary. Cleanup protocols for LBP vary based on intended building reuse (i.e., residential vs industrial).

3.3 PCBs

KGSNE identified PCB concentrations above the TSCA cleanup standard of 1.0 ppm in samples collected from gym floor paper, hardwood subfloor paper, light pink paint, light blue paint, grey door caulking, white window caulking, white wall paint, and blue floor paint. PCB analytical results are presented in Table 4.

Federal TSCA regulations establish remediation and disposal requirements for hazardous wastes with total PCB concentrations greater than 50 ppm. TSCA hazardous wastes are either classified as PCB bulk product waste or PCB remediation waste, and generally PCB-containing building materials are considered as a bulk product waste. EPA defines PCB bulk product waste as waste derived from products manufactured to contain PCBs in a non-liquid state at 50 ppm or greater (e.g., caulk, paint, mastics, and sealants). Grey floor paint was detected at a concentration of 5,700

ppm, which exceeds the 50-ppm limit. This material will require EPA notification, and removal and disposal will need to be performed in general accordance with TSCA regulated waste.

In 2013, EPA clarified the meaning of TSCA “Excluded PCB Products” to deemphasize the regulation of commercial products containing low concentrations of PCBs. Excluded products include materials legally installed before October 1, 1984, products legally manufactured and used pursuant to authority granted by EPA, and materials where the resulting PCBs concentration is not the result of diffusion, leaks, or spills of PCBs in concentrations over 50 ppm. However, the burden of demonstrating that a regulatory exclusion applies rests with the party seeking that exclusion.

The disposal contractor should perform additional investigations to determine if materials with PCB concentrations greater than 1 ppm, but less than 50 ppm are a TSCA Excluded PCB Product as defined in 40 CFR Part 761.3 and are therefore unregulated.

If the material is deemed an excluded product and unregulated, removal may not be required. If PCB -containing components are to be removed, proper handling of PCB-containing materials by appropriately trained workers is still required and waste must be disposed of at a facility permitted to accept PCB-containing materials at the concentrations present. These materials should be evaluated by the demolition/disposal contractor and the receiving facility to identify any disposal limitations prior to material removal.

If the PCB-containing material is not an excluded product, it is regulated under TSCA and special handling, disposal, and regulatory compliance are required. Surrounding substrates such as brick, cement block, and cement may also be subject to special handling and disposal if PCBs have leached into these building components at concentrations greater than 1 ppm and remediation of adjacent materials such as soil may also be necessary if PCB-containing materials have degraded and cross-contaminated the surroundings. Additional testing should be performed on substrates to which the PCB-containing material was adhered and on surrounding material to delineate PCB leaching and cross contamination if a product is not excluded from TSCA regulations.

3.4 Hazardous Materials Inventory

Regulated materials and universal wastes encountered during the survey include fluorescent light tubes, fluorescent light ballasts, lead acid batteries, fire extinguishers, refrigerator/freezer, and a microwave. The hazardous materials inventory is presented in Table 5.

Hazardous materials that may require special handling and disposal should be removed from the building prior to renovation/demolition. Materials handling, transport, and recycling or disposal should be in accordance with applicable Federal, State, and local laws and regulations.

Hazardous materials removal contractors should consult labels on each fluorescent light ballast during removal to confirm if ballasts contain hazardous waste. Fluorescent light ballasts labeled as non-PCB containing may contain diethylhexyl phthalate (DEHP). DEHP was the primary substitute to replace PCBs for small capacitors in fluorescent lighting ballasts and is a toxic substance and a suspected carcinogen. Superfund liability exists for landfilling of DEHP-containing ballasts; therefore, the disposal contractor should avoid disposing of DEHP containing ballasts in the general waste stream. Non-PCB ballasts should be disposed of via metals recycling and incineration.

3.5 Mold

Mold samples were found to contain significantly elevated concentrations of mold in the air, as well as heavy to moderate mold growth on surfaces. Mold results are included on Tables 6 and 7. All mold types may cause health symptoms. Generally, mold health hazards increase as mold spore counts increase. Fruiting structures (active mold) also increase mold health hazards; therefore, high spore counts, fruiting structures, and toxigenic molds should be considered the most hazardous. Indoor fungal growth is undesirable, and measures should be taken to eliminate mold.

Mold is very common in buildings and homes and will grow where there is moisture. Although mold is ubiquitous, the Center for Disease Control recommends that molds be removed from buildings. Toxigenic mold should be eliminated; however, mold cannot be eliminated or controlled until the moisture source is eliminated. Personnel working in mold infested areas should don worker protection such as respirators and Tyvek suits until air sampling or mold sampling data proves mold is no longer a hazard or until mold is removed.

Building demolition will not likely require mold abatement; however, building renovation will require mold removal. If possible, moldy building components should be cleaned or removed during renovation; however, widespread mold growth identified on materials throughout the building may be too intrusive for cleaning and would require material removal to eliminate mold hazards.

Based on building conditions, KGSNE does not recommend reuse of non-structural building components contaminated with mold, as the removal of organic based building materials is the best method to eliminate mold. Surfaces that are metal, concrete, and plaster can be cleaned with an agent to remove the mold, depending on the physical condition of the building material. Conditions such as water leaks, condensation, and flooding must be corrected to prevent mold regrowth.

3.6 Abatement Costing

Table 8 provides a preliminary cost estimate based on prevailing wage rates for abatement and disposal of hazardous and regulated wastes identified in accessible building areas. The disposal contractor should verify hazardous material locations, quantity, and disposal costs before conducting removal activities. Actual abatement and disposal costs may vary and are strongly influenced by abatement contractor availability, the building reuse determination, building design, and the selection of demolition or renovation.

Encapsulation and management of ACM, LBP, and PCBs do not appear to be viable options in this case due to extensive damage to building materials throughout the building. Additional costs should be anticipated for the disposal of hidden and/or miscellaneous items found throughout the building during demolition/renovation. Additional cost should be carried for engineering planning and oversight (i.e., industrial hygiene costs). KGSNE considered the following while generating the cost estimates:

- Abatement cost estimates are based on unit costs provided by New England based abatement contractors providing typical in-type abatement and disposal services.

- While addressing lead and mold may not produce a hazardous waste stream that requires management and disposal, LBP and mold should be addressed in accordance with OSHA regulations for worker safety. KGSNE has included costs for LBP abatement/preparation prior to torch cutting for worker safety. Lead abatement may not be necessary if the

selected method of demolition does not create a lead hazard for demolition personnel (e.g., crushing vs torch cutting).

- LBP and mold abatement costs are heavily dependent on plans for re-use (lead and mold may only have to be abated if the buildings are to be renovated), and renovation and demolition plans and should be reviewed by a licensed lead paint and mold abatement contractors after final reuse is determined. In many instances, it is more cost effective to remove and dispose of non-structural components contaminated with mold and LBP rather than to perform abatement and reuse these materials.

- Abatement of PCB contaminated materials is not included in the abatement estimate. Costing is highly dependent on means and measures. Consult an abatement contractor for actual pricing.

4.0 DATA USABILITY AND VALIDATION

KGSNE performed an EPA Region 1 Tier I Plus data validation on the PCB analytical data. The data validation memorandum is included in Appendix H. The data review was completed in accordance with the *EPA New England Environmental Data Review Supplement for Regional Data Review Elements and Superfund Specific Guidance/Procedures* (June 2018); *USEPA National Functional Guidelines for Superfund Organic Methods Data Review* (January 2017); *USEPA National Functional Guidelines for Superfund Inorganic Methods Data Review* (January 2017); and the SSQAPPA.

EAI performed the requested analyses in conformance with the established planning documents.

Data validation indicates that the data meets the project quality criteria and that the results can be used without restriction. Based on this determination, these results are considered usable for decision making.

5.0 REFERENCES

EPA Region I. 2009.Planning and Documenting Brownfields Projects Generic Quality Assurance Project Plans and Site Specific QAPP Addenda. March.

KGSNE JV, LLC. 2017. Program Quality Assurance Project Plan; RFA# 17078. May 17.

KGSNE JV, LLC. 2020. Site-Specific Quality Assurance Project Plan Addendum for Hazardous Materials Assessment. September 2.

TABLES

Table 1
Summary of Positive Asbestos Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	Sample Location	Sample Description	Analytical Result
Historically Sampled	Throughout	Plaster walls and ceilings	2% Chrysotile
24A-24C	Room 27	6" Aircell pipe insulation	40% Chrysotile
42A-42C	Room 27	Mudded joint packing	33% Chrysotile
N/A	Boiler room	Boiler internal materials	Assumed Positive

Notes:

1. Positive ACM samples were identified in ATC Environmental Survey Report dated March 28, 2013.

Table 2
Summary of Negative Asbestos Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	Sample Location	Sample Description	Result
SJ-ACM-1	Gym Floor - 1st Level - S. Side	Black Flooring Felt	ND
SJ-ACM-2	Gym Floor - 1st Level - NE Corner	Black Flooring Felt	ND
SJ-ACM-3	1st Floor Foyer - S. Wall	Beige Wall Glue	ND
SJ-ACM-4	1st Floor Foyer - S. Wall	Beige Wall Glue	ND
SJ-ACM-5	Attic by Roof Hatch - W. Side of Stairs	Black Knob & Tube Wiring	ND
SJ-ACM-6	Attic by Roof Hatch - Stairwell	Black Knob & Tube Wiring	ND
SJ-ACM-7	2nd Level - SW Room	Black Electrical Wiring	ND
SJ-ACM-8	2nd Level - SW Room	Black Electrical Wiring	ND
SJ-ACM-9	2nd Floor - Large Center Room/Foyer N. Side	Brown Flooring Paper	ND
SJ-ACM-10	1st Floor SE Room - S. Side	Brown Flooring Paper	ND
SJ-ACM-11	2nd Level - NW Room - Ceiling - NW Corner	Black Roofing Tar	ND
SJ-ACM-12	2nd Level - NW Room - Ceiling - W. Side	Black Roofing Tar	ND
SJ-ACM-13	2nd Level - NW Room - E. Fireplace	Fireplace Brick	ND
SJ-ACM-14	2nd Level - NW Room - E. Fireplace	Fireplace Brick	ND
SJ-ACM-15	2nd Level - NW Room - E. Fireplace	Fireplace Mortar	ND
SJ-ACM-16	2nd Level - NW Room - E. Fireplace	Fireplace Mortar	ND
SJ-ACM-17	Basement - W. Addition - NE Room	Orange Carpet Glue Remnant	ND
SJ-ACM-18	Basement - W. Addition - W. End of Hallway	Orange Carpet Glue Remnant	ND
SJ-ACM-19	1st Level - Main Entrance Bathroom - W. Side	Brown Battleship Linoleum	ND
SJ-ACM-20	1st Level - Main Entrance Bathroom - E. Side	Brown Battleship Linoleum	ND
SJ-ACM-21	Basement - Door at Bottom of Stairwell	Fireproof/Retardant Board	ND
SJ-ACM-22	Basement - Door at Bottom of Stairwell	Fireproof/Retardant Board	ND
SJ-ACM-23	Basement - Door at Bottom of Stairwell	Fireproof/Retardant Board	ND
SJ-ACM-24	Basement - Boiler Room	Boiler Cementitious Coating	ND
SJ-ACM-25	Basement - Boiler Room	Boiler Cementitious Coating	ND
SJ-ACM-26	Basement - Boiler Room	Boiler Cementitious Coating	ND
SJ-ACM-27	Boiler Door - Putty Material	Boiler Door Putty	ND
SJ-ACM-28	Boiler Door - Putty Material	Boiler Door Putty	ND
SJ-ACM-29	Boiler Door - Putty Material	Boiler Door Putty	ND
SJ-ACM-30	Boiler - Interior	Firebrick	ND
SJ-ACM-31	Boiler - Interior	Firebrick	ND
SJ-ACM-32	Boiler - Stacked by Boiler	Firebrick	ND
SJ-ACM-33	Boiler - Bottom Ext. Layer	Blue Tinted Insulation	ND
SJ-ACM-34	Boiler - Bottom Ext. Layer	Blue Tinted Insulation	ND
SJ-ACM-35	Boiler - Bottom Layer	Blue Tinted Insulation	ND
SJ-ACM-36	1st Level - Main Foyer - E. Side	Flooring Glue Remnant	ND
SJ-ACM-37	1st Level - Main Foyer - W. Side	Flooring Glue Remnant	ND
SJ-ACM-38	Basement - S. Corridor - N. Wall	Tan Wall Adhesive	ND
SJ-ACM-39	Basement - S. Corridor - NE Corner	Tan Wall Adhesive	ND
SJ-ACM-40	2nd Level - NE Room - N. Side	White 2x4 Ceiling Tile	ND
SJ-ACM-41	2nd Level - NE Room - S. Side	White 2x4 Ceiling Tile	ND
SJ-ACM-42	2nd Level - NW Room - N. Side	Ceiling Panel Remnant	ND
SJ-ACM-43	2nd Level - NW Room - S. Side	Ceiling Panel Remnant	ND
SJ-ACM-44	Boiler Room - Electrical Panel - NW Corner	High Voltage Wire Coating	ND
SJ-ACM-45	Boiler Room - Electrical Panel - NW Corner	High Voltage Wire Coating	ND
01A-01C	Exterior	Gray door caulking	ND
02A-02C	Exterior	White window caulking	ND
03A-03C	Exterior	White window glazing	ND
04A-04C	Exterior	White window caulking	<1%[1]
05A-05C	Exterior	Tar brick caulking	<1%[1]

Table 2
Summary of Negative Asbestos Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	Sample Location	Sample Description	Result
06A-06C	Exterior	Silver flashing	ND
07A-07C	Roof	Built up pebble and tar	ND
08A-08C	Roof	Roofing felt	ND
09A-09C	Exterior	Black caulk at gambrel flashing	ND
12A-12C	First floor	Carpet mastic	ND
16A-16C	Basement	Gray floor paint	ND
19A-19C	Basement	White wall paint	ND
20A-20C	Rooms 25 and 26	Blue floor paint	ND
21A-21C	Room 18	12x12 Beige Floor Tile	ND
22A-22C	Room 18	Mastic on 21A-21C floor tile	ND
28A-28C	Gym	White window sill wall coating	ND
29A-29C	Room 12	Blue & maroon resilient sheet flooring	ND
30A-30C	Room 12	Mastic on 29A-29C sheet flooring	ND
31A-31C	First floor and basement	Black stair tread risers	ND
33A-33C	Room 25	Brown glue dabs	ND
35A-35C	Rooms 18 and 29	Blown-in-insulation	ND
38A-38C	Room 20 - boiler room	Debris on boiler, exhuast, duct & hot water tank	ND
40A-40C	Room 21	Pipe putty	ND
44A	Boiler room	Boiler gasket	ND

Notes:

1. Environmental Survey by ATC dated March 28, 2013 identified "Trace" quantities of asbestos as <1%
2. Samples SJACM-1 through SJACM-45 were collected by Nobis on February 3-4, 2021.
3. Samples 01A-44A were collected by ATC as identified in the Environmental Survey report dated March 28, 2013.

Table 3
Summary of Positive LBP Screening Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Location	Description	Max XRF Screening Value (mg/cm^2)
ATC Environmental Survey 3/28/13		
Exterior	White windows - all components	>9.9
Exterior	White wood side porch	3
Throughout Building	White wood window wells	>9.9
Room 21	Blue brick wall	3
Room 21	Green metal door	3.4
Basement	Grey concrete floor	1.5
Room 23	Green brick walls and ceiling	1.5
Room 24	Green brick walls	3
Room 25	Green brick walls	3
Room 25	White wood stair riser	1.1
KD Associates LBP Assessment 2/15/21		
Room 3	Tan plaster walls	1.5
Room 3	Brown wood column	1.9
Stairwells	Brown wood stair railing	1.9
Stairwells	White stair riser	1.1
Room 24	Tan brick walls	4
Room 23	White metal ceiling	1.6
Room 23	Green brick walls	1.6
Room 22	Green cement floor	1.5
Room 25	Green brick walls	3.1
Room 25	Grey cement floor	1.3
Exterior	White window trim	19.3
Exterior	Green window sash	28.6
Exterior	White porch trim	1.7

Notes:
1. XRF - x-ray fluorescence
2. Table presents XRF screening results for media that tested positive for LBP. Refer to Appendix C - Lead Report for a complete listing of media tested during the survey.
3. Listed XRF screening values are the highest value recorded for the range of screening values for each media.
4. Room numbers from KD Associates, Inc. Lead Based Paint Assessment dated 2/15/21 were changed to match room numbers from ATC Environmental Survey dated 3/28/13.

Table 4
Summary of PCB Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Parameter	TSCA Cleanup Standard	Sample Results (mg/kg)													
Sample ID		**P-1**	**P-2**	**P-3**	**P-4**	**P-5**	**1B**	**2A**	**3B**	**4A**	**5B**	**6A**	**16C**	**19B**	**20B**
Sampling Date		2/3/2021	2/3/2021	2/3/2021	2/3/2021	2/3/2021	12/17/2012	12/17/2012	12/17/2012	12/17/2012	12/17/2012	12/17/2012	12/17/2012	12/17/2012	12/17/2021
Sampling Time		11:45 AM	12:20 PM	12:30 PM	12:40 PM	12:50 PM	10:06 AM	10:15 AM	10:28 AM	10:31 AM	10:42 AM	11:01 AM	11:49 AM	11:55 AM	12:06 PM
Description		Gym Floor Paper	Black Tar- 2nd floor	Hardwood Subfloor Paper	Light Pink Paint - 2nd Floor	Light Blue Paint- 2nd Floor	Grey Door Caulking	White Window Caulk	Window Glaze	Window Caulk	Tar Caulking	Silver Flashing	Grey Floor Paint	White Wall Paint	Blue Floor Paint
PCBs (ppm)															
PCB 1016	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<0.88
PCB 1221	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<0.88
PCB 1232	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<0.88
PCB 1242	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<0.88
PCB 1248	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<0.88
PCB 1254	~	4.4	<1	7.8	45	22	14	1.5	<0.64	26	<0.71	<0.49	5700	7.4	44
PCB 1260	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<5.5
PCB 1262	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<5.5
PCB 1268	~	<0.2	<1	<0.09	<0.3	<0.4	<0.89	<0.84	<0.64	<0.85	<0.71	<0.49	<500	<0.50	<5.5
Total PCBs	1	**4.4**	<1	**7.8**	**45**	**22**	**14**	**1.5**	<0.64	**26**	<0.71	<0.49	**5700**	**7.4**	**44**

Notes:
1. Results are in parts per million (ppm)/milligrams per kilogram (mg/kg).
2. Samples analyzed by Method SW-846 8082A with Soxhlet extraction
3. Bold values exceed the Toxic Substances Control Act (TSCA) cleanup standard (1 ppm total PCBs).
4. PCB - Polychlorinated Biphenyls
5. "<0.46" = Not detected above the lab reporting limits (shown in parenthesis).
6. Samples P-1 through P-5 were collected by Nobis on 2/3/21.
7. Samples 1B through 20B were collected by ATC on 12/17/12 identified in the ATC Associates Environmental Survey report dated 3/28/13.

Table 5
Hazardous/Regulated Materials Inventory
Former St. Johnsbury Armory
St. Johnsbury, VT

Material	Quantity
First Floor Gym	
Halogen Lights	12
Emergency Light and Exit Signs (lead acid battery)	2
Emergency Light (lead acid battery)	1
Fire Extinguisher	1
First Floor Entry	
Light ballasts	3
Fluorescent light bulb - 4'	6
Fire Extinguisher	1
First Floor Food Service	
Light ballasts	8
Fluorescet light bulb - 4'	16
Refrigerator/Freezer	1
Microwave	1
First Floor Northeast Office	
Light ballasts	4
Fluorescent light bulb - 4'	8
Fluorescent light bulb - 4' (loose)	5
First Floor Utility Closet	
Light ballasts	1
Fluorescent light bulb - 4'	1
Consumer cleaning products	NA
First Floor Southeast Room	
Light ballasts	3
Fluorescent light bulb -4'	6
Second Floor Main Area	
Compact Fluorescent Bulbs	5
Second Floor Northwest Room	
Light ballasts	14
Second Floor Northeast Room	
Compact Fluorescent Bulbs	1
Basement Men's Room	
Compact Fluorescent Bulbs	2
Emergency Light and Exit Signs (lead acid battery)	1
Basement Bathroom Hallway	
Compact Fluorescent Bulbs	1
Emergency Light (lead acid battery)	1
Basement Womens Room	
Compact Fluorescent Bulbs	2
Emergency Light and Exit Signs (lead acid battery)	1
Basement South End Hallway	
Light ballasts	8
Fluorescent light bulb-4'	14
Emergency Light and Exit Signs (lead acid battery)	1
Basement West End Hallway	
Car Battery	1
Compact Fluorescent Bulbs	2
Emergency Light and Exit Signs (lead acid battery)	2
Fluorescent Light Bulbs -4'	20
Light ballasts	7

Table 5
Hazardous/Regulated Materials Inventory
Former St. Johnsbury Armory
St. Johnsbury, VT

Material	Quantity
Basement South Rooms	
Light ballasts	20
Fluorescent Light Bulbs -4'	24
Emergency Light and Exit Signs (lead acid battery)	1
Basement North Rooms	
Light ballasts	36
Fluorescent Light Bulbs -4'	58
Compact Fluorescent Bulbs	3
Emergency Light and Exit Signs (lead acid battery)	4
Basement North Entrance	
Light ballasts	10
Fluorescent Light Bulbs -4'	20
Emergency Light and Exit Signs (lead acid battery)	1
Basement East Room Next to Stairway	
Light ballasts	2
Fluorescent Light Bulbs -4'	4

Table 6
Summary of Mold Swab Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	SJ1	SJ2	SJ3	SJ4	SJ5	SJ6	SJ7
Sample Location	Gym - First Level	Foyer - First Level	Foyer - Second Level	Northwest Room - Second Level	Northeast Basement Corridor	Far Basement Corridor	Basement Shower Room- Mushrooms
Aspergillys/Penicillium like	Heavy	Moderate	Heavy	Heavy	Heavy	Heavy	-
Basidiospores Type II	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy
Chametomium globosum	-	Heavy	-	-	-	-	-
Cladosporium cladosporioides	Heavy	Moderate	-	Heavy	-	-	-
Cladosporium sphaerospermum	-	-	-	-	-	-	-
Stachybotrys	-	-	-	Heavy	-	-	-
Ulocladium like	-	-	-	-	-	-	-
Trichoderma	-	-	-	-	-	-	-

Notes:
1. Results are presented as the following ranges - Few: 1 to 100 Moderate: 101-1000 Heavy: > 1000.
2. - = Non Detect.
3. Molds identified are Type II - Risky molds associated with indoor mositure problems (when indoor levels are signficantly higher than background levels).

Table 6
Summary of Mold Swab Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	SJ8	SJ9	SJ10
Sample Location	Southwest Basement Corridor	Gym- First Level Floor Surface	Foyer Floor - First Level
Aspergillys/Penicillium like	Heavy	Heavy	Heavy
Basidiospores Type II	Heavy	Heavy	Heavy
Chametomium globosum	-	-	-
Cladosporium cladosporioides	-	Heavy	-
Cladosporium sphaerospermum	-	-	-
Stachybotrys	-	-	-
Ulocladium like	-	-	-
Trichoderma	-	-	-

Notes:
1. Results are presented as the following ranges - Few: 1 to 100 Moderate: 101-1000 Heavy: > 1000.
2. - = Non Detect.
3. Molds identified are Type II - Risky molds associated with indoor mositure problems (when indoor levels are signficantly higher than background levels).

Table 7
Summary of Mold Air Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	2606118			2606127			2606099		
Sample Location	Gym - First Level			Kitchen/Bar Area - First Level			Southeastern Room - First Level		
Air Volume	25 liters			25 liters			25 liters		
Limit of Detection	0.4			0.4			0.4		
Background Debris Scale	2			2.5			3		
	Raw Count	Count/m^3	%	Raw Count	Count/m^3	%	Raw Count	Count/m^3	%
Total Fungal Spore Count	**62**	**2,480**	**100**	**91**	**3,640**	**100**	**55**	**2,200**	**100**
Type I									
Badiospores	-	-	-	-	-	-	-	-	-
Type II									
Aspergillus/Penicillium like	42	1,680	68	65	2,600	71	37	1,480	67
Badiospores	20	800	32	26	1,040	29	18	720	33
Chaetomium globsum	-	-	-	-	-	-	-	-	-
Cladosporium cladosporiodes	-	-	-	-	-	-	-	-	-
Spore Chains/Clusters	-	2	-	-	2	-		1	-

Notes:
1. Results are presented as the following ranges - Few: 1 to 100 Moderate: 101-1000 Heavy: > 1000.
2. - = Non Detect.
3. Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors.
4. Type II - Risky molds associated with indoor mositure problems (when indoor levels are signficantly higher than background levels).

Table 7
Summary of Mold Air Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	2606129			2606119			2606139		
Sample Location	Northeast Room - Second Level			Large Foyer - Second Level			Southwest Room - Second Level		
Air Volume	25 liters			25 liters			25 liters		
Limit of Detection	0.4			0.4			0.4		
Background Debris Scale	3			3			2		
	Raw Count	Count/m^3	%	Raw Count	Count/m^3	%	Raw Count	Count/m^3	%
Total Fungal Spore Count	**97**	**3,880**	**100**	**40**	**1,600**	**100**	**96**	**3,840**	**100**
Type I									
Badiospores	1	40	1	-	-	-	1	40	1
Type II									
Aspergillus/Penicillium like	57	2,280	59	32	1,280	80	75	3,000	78
Badiospores	39	1,560	40	8	320	20	20	800	21
Chaetomium globsum	-	-	-	-	-	-	-	-	-
Cladosporium cladosporiodes	-	-	-	-	-	-	-	-	-
Spore Chains/Clusters	-	None	-	-	None	-	-	None	-

Notes:
1. Results are presented as the following ranges - Few: 1 to 100 Moderate: 101-1000 Heavy: > 1000.
2. - = Non Detect.
3. Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors.
4. Type II - Risky molds associated with indoor mositure problems (when indoor levels are signficantly higher than background levels).

Table 7
Summary of Mold Air Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	2606140			2606130			2606120		
Sample Location	Southeast Bathroom - Basement			North Central Corridor - Basement			Southwest Hall - Basement		
Air Volume	25 liters			25 liters			25 liters		
Limit of Detection	0.4			0.4			0.4		
Background Debris Scale	2			2			2		
	Raw Count	Count/m^3	%	Raw Count	Count/m^3	%	Raw Count	Count/m^3	%
Total Fungal Spore Count	**419**	**16,760**	**100**	**208**	**8,320**	**100**	**67**	**2,680**	**100**
Type I									
Badiospores	-	-	-	-	-	-	7	280	10
Type II									
Aspergillus/Penicillium like	176	7,040	42	126	5,040	61	17	680	25
Badiospores	237	9,480	57	68	2,720	33	39	1,560	58
Chaetomium globsum	2	80	0.5	4	160	2	-	-	-
Cladosporium cladosporiodes	4	160	1	10	400	5	4	160	6
Spore Chains/Clusters	-	9	-	-	4	-	-	3	-

Notes:
1. Results are presented as the following ranges - Few: 1 to 100 Moderate: 101-1000 Heavy: > 1000.
2. - = Non Detect.
3. Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors.
4. Type II - Risky molds associated with indoor mositure problems (when indoor levels are signficantly higher than background levels).

Table 7
Summary of Mold Air Analytical Results
Former St. Johnsbury Armory
St. Johnsbury, VT

Sample ID	**2606109**		
Sample Location	**Outdoors**		
Air Volume	**25 liters**		
Limit of Detection	**0.4**		
Background Debris Scale	**2**		
	Raw Count	**Count/m^3**	**%**
Total Fungal Spore Count	**12**	**480**	**100**
Type I			
Badiospores	8	320	67
Type II			
Aspergillus/Penicillium like	2	80	17
Badiospores	2	80	17
Chaetomium globsum	-	-	-
Cladosporium cladosporiodes			
Spore Chains/Clusters	-	None	-

Notes:
1. Results are presented as the following ranges - Few: 1 to 100 Moderate: 101-1000 Heavy: > 1000.
2. - = Non Detect.
3. Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors.
4. Type II - Risky molds associated with indoor mositure problems (when indoor levels are signficantly higher than background levels).

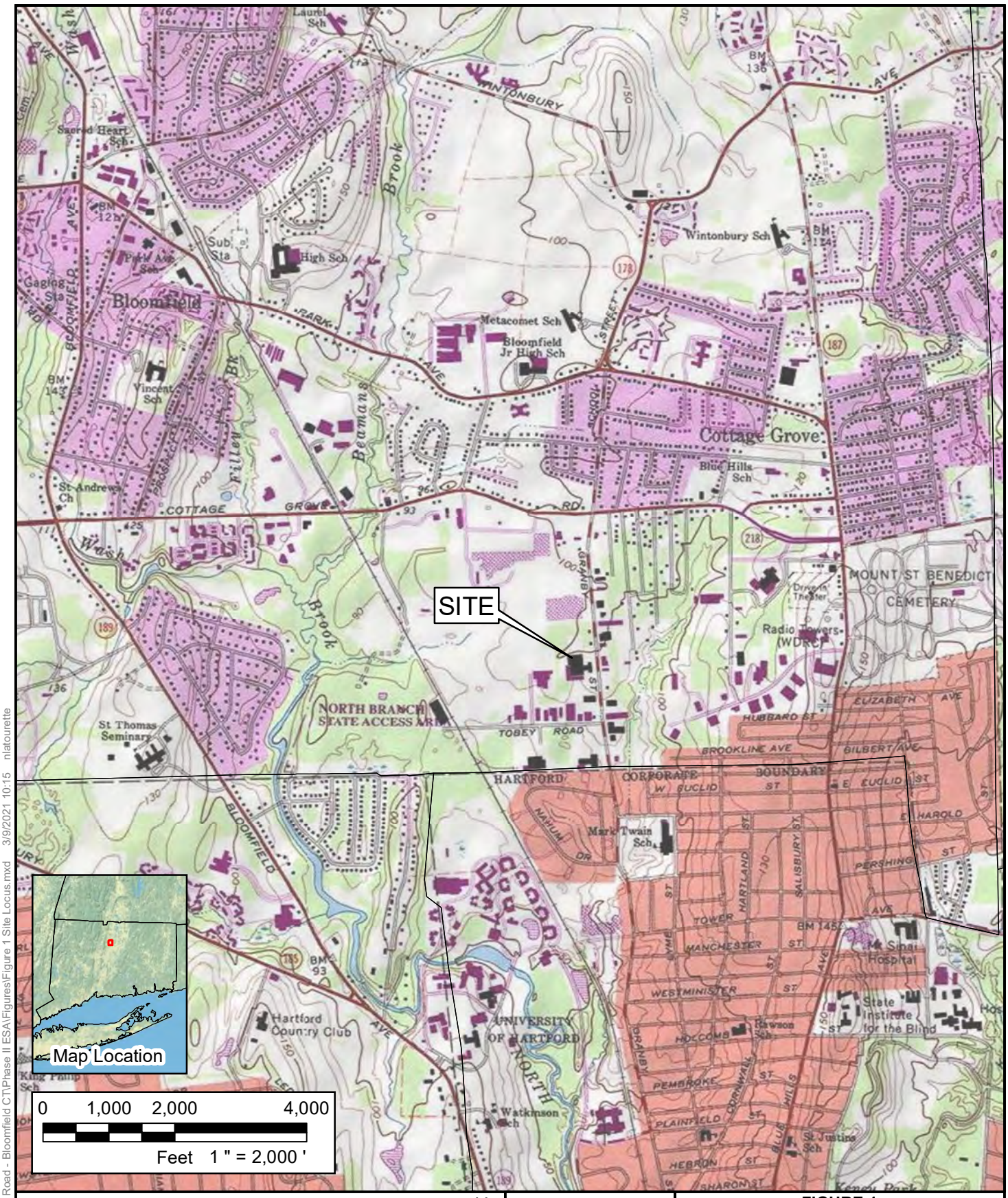
Table 8
Abatement Cost Estimate
Former St. Johnsbury Armory
St. Johnsbury, VT

Material	Location	Quantity	Units	Price Per Unit	Disposal Cost Estimate
ACM					
Wall/Ceiling Plaster	Throughout	12,500	SF	$ 5.00	$ 62,500.00
Air Cell Pipe Insulation	Room 27 Basement	100	LF	$ 22.00	$ 2,200.00
Mudded Joint Packing	Room 27 Basement	10	LF	$ 30.00	$ 300.00
Boiler Internals	Basement Northeast	1	EA	$ 5,000.00	$ 5,000.00
				Subtotal	**$ 70,000.00**
LBP					
Lead abatement/preparation prior to torch cutting for worker safety [8]		3	EA	$ 30,000.00	**$ 90,000.00**
					$ 90,000.00
Regulated/Hazardous Materials					
Fluorescent Bulbs (4')	Throughout	650	LF	$ 0.10	$ 65.00
Compact Fluorescent and Halogen Bulbs	Throughout	30	EA	$ 5.00	$ 150.00
Ballasts (No PCB Type)	Throughout	40	EA	$ 15.00	$ 600.00
Ballasts (PCB)	Basement	66	EA	$ 30.00	$ 1,980.00
Batteries (Emergency lights and exit signs)	Throughout	30	lb	$ 5.00	$ 150.00
Batteries (Automotive)	Basement Hallway	1	EA	$ 50.00	$ 50.00
				Subtotal	**$ 2,995.00**
			Grand Total (Does Not Include Lead Costs)		**$ 72,995.00**
			Grand Total (Inculding Lead Cost)		**$ 162,995.00**

Notes:

1. Hazardous materials inventory does not include chemicals (cleaners, oils, fuels, etc.) or equipment and appliances (TVs, refrigerators, AC units, etc.) as they are likely to be removed from the building prior to renovation.
2. Disposal cost for ballast assumes that all ballasts are "No PCB" type ballasts, as PCB containing ballasts were not observed during the survey. If PCB ballasts are encountered during renovation, disposal costs would be $30/ea. Disposal contractor is responsible for confirming PCB content of light ballasts.
3. ACM and Hazardous Materials inventory does not include materials located in inaccessible sections of the building.
4. Emergency light and exit sign battery disposal costs are calcualted assuming that each battery weighs 2 pounds. Automotive battery disposal costs assumes labor charge for removal and transport and that batteries are recycled (no disposal charge or credit given).
5. Quantities established from field calculations or Town-provided drawings.
6. Some quantities are estimated or rounded up to provide a conservative abatement cost.
7. Price per unit rates are prevailing wage rates.
8. Lead abatement cost is for OSHA worker safety compliance. Lead abatement may not be necessary if the selected method of demolition does not create a lead hazard for demolition personnel (e.g. crushing vs torch cutting). Nobis assumes up to 3 major structures will require lead abatement prior to torch cutting to dismantle structures to be demolished.
9. Cost for areas with multiple layers of ACM were calculated seprately for each layer.
10. PCBs are not included in this estimate, TSCA level PCBs require sepcial handing and disposal. Non-TSCA level PCBs may also require special handling and disposal. Contact an abatement contractor for costing.
11. Mold abatement is not included in this estimate. Mold abatement may be required for renovations, contact an abatement contractor for abatement costing.

FIGURES



USGS Topographic Map
Hartford North, Conn.
Revised 1964

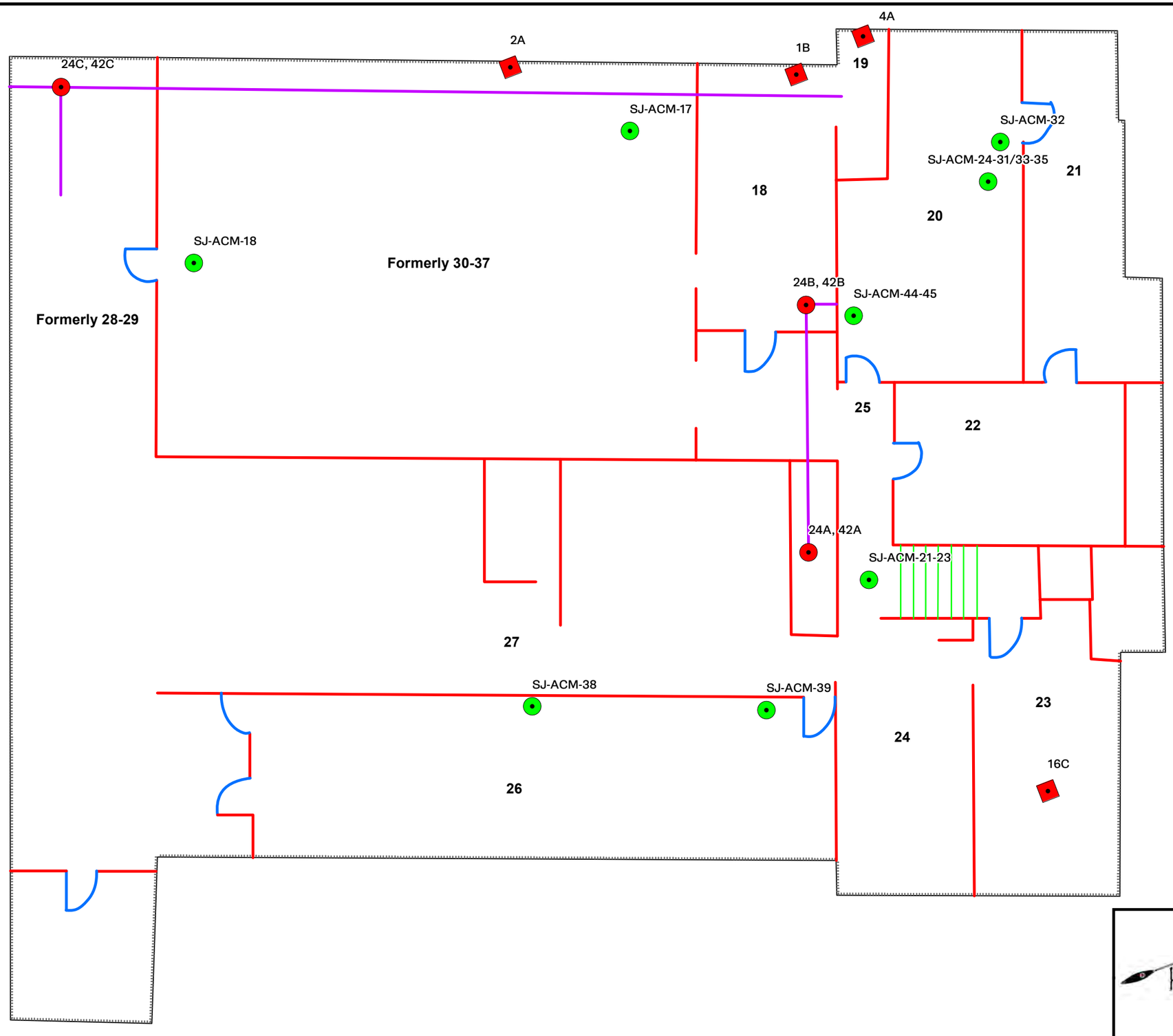
KGSNE

FIGURE 1

SITE LOCUS
85 GRANBY STREET
BLOOMFIELD, CONNECTICUT

PREPARED BY: NL	CHECKED BY: TA
PROJECT NO. 095560.000	DATE: MARCH 2021

J:\095560.20 - 85 Grandby Road - Bloomfield CT\Phase II ESA\Figures\Figure 1 Site Locus.mxd 3/9/2021 10:15 nlatourette



Notes:

1. Samples with "SJ-ACM-#" sample IDs were collected by Nobis on 2/4/21.

2. Absetos Samples 24A, 24B, 24C, 42A, 42B and 42C were collected by ATC and indentified in the ATC Environmental Survey Report.

3. PCB Samples 1B, 2A, 4A and 16C were collected by ATC on 12/17/12 and identified in the ATC Associates Environmental Survey Report.

4. Room numbers are from the ATC Environmental Survey Report. Room features may be represented differently than those in the Survey.

5. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

Legend

- PCB Sampling Location Result >1 ppm
- Asbestos Sampling Location Result >1%
- Asbestos Sampling Location Result "Non-Detect"
- Air Cell TSI
- Basement Door
- Basement Stairs
- Basement Wall
- Basement Footprint

0 5 10 20

Feet

1 inch = 10 feet

N

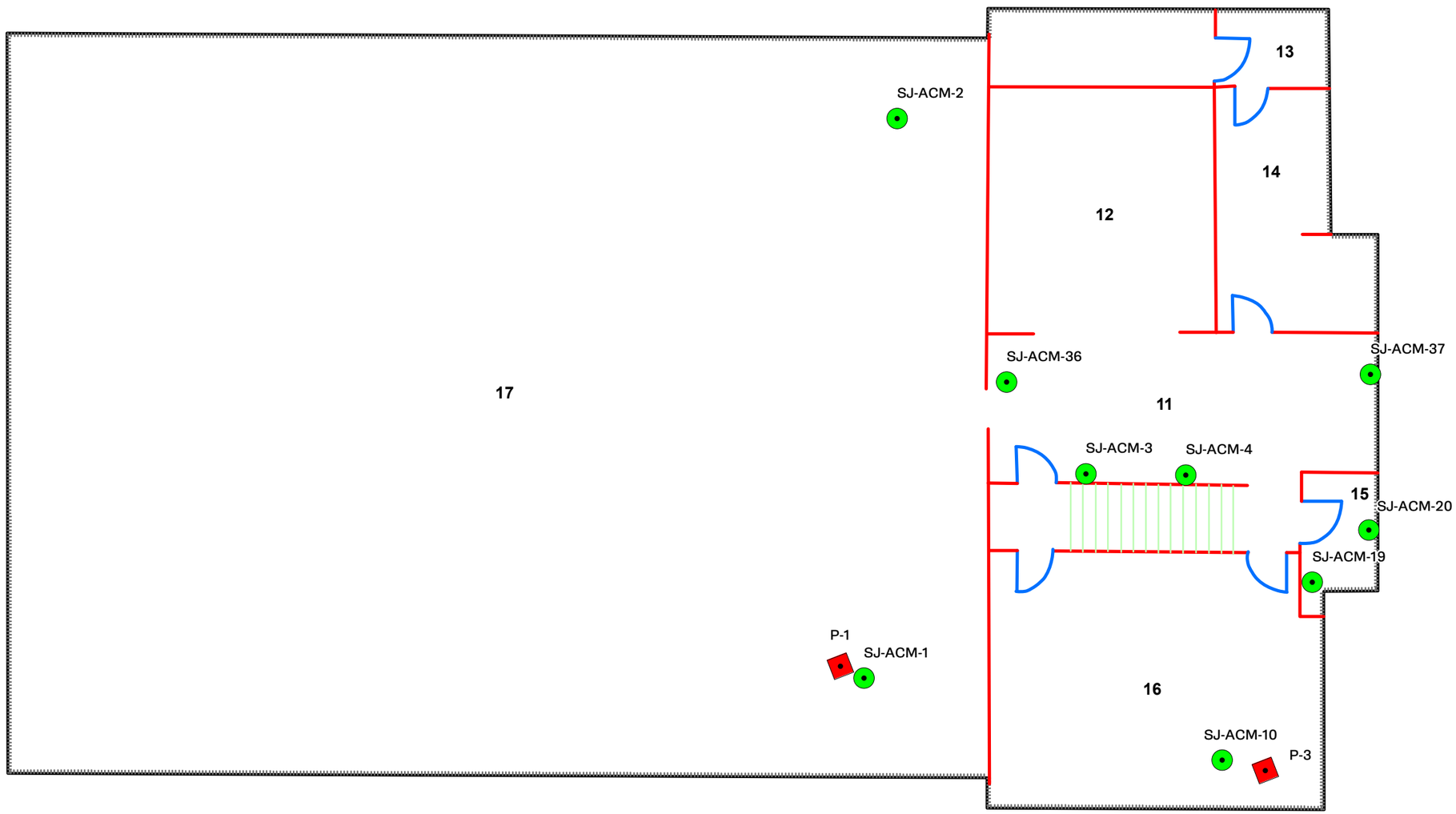
KGSNE

FIGURE 2A

BASEMENT LAYOUT WITH SAMPLE DATA
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: NL	CHECKED BY: TA
PROJECT NO. 93203.11	DATE: MARCH 2021

\\nobis.local\shares\Projects\Active\93203.00 - START Contract - Task Order 03\93203.11 - St. Johnsbury Armory\GIS\Figure 3 St. Johnsbury Armory Basement Data.mxd 3/9/2021 15:28 jstewart



Notes:

1. Samples with "SJ-ACM-#" sample IDs were collected by Nobis on 2/4/21.

2. Samples P-1 and P-3 were collected by Nobis on 2/3/21.

3. Room numbers are from the ATC Environmental Survey Report. Room features may be represented differently those presented in the survey.

4. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

Legend

- Asbestos Sample Location Result "Non-Detect"
- PCB Sample Location Result >1 ppm
- 1st Floor Door
- 1st Floor Stairs
- 1st Floor Wall
- Floor Footprint

0 5 10 20

Feet
1 inch = 10 feet

N

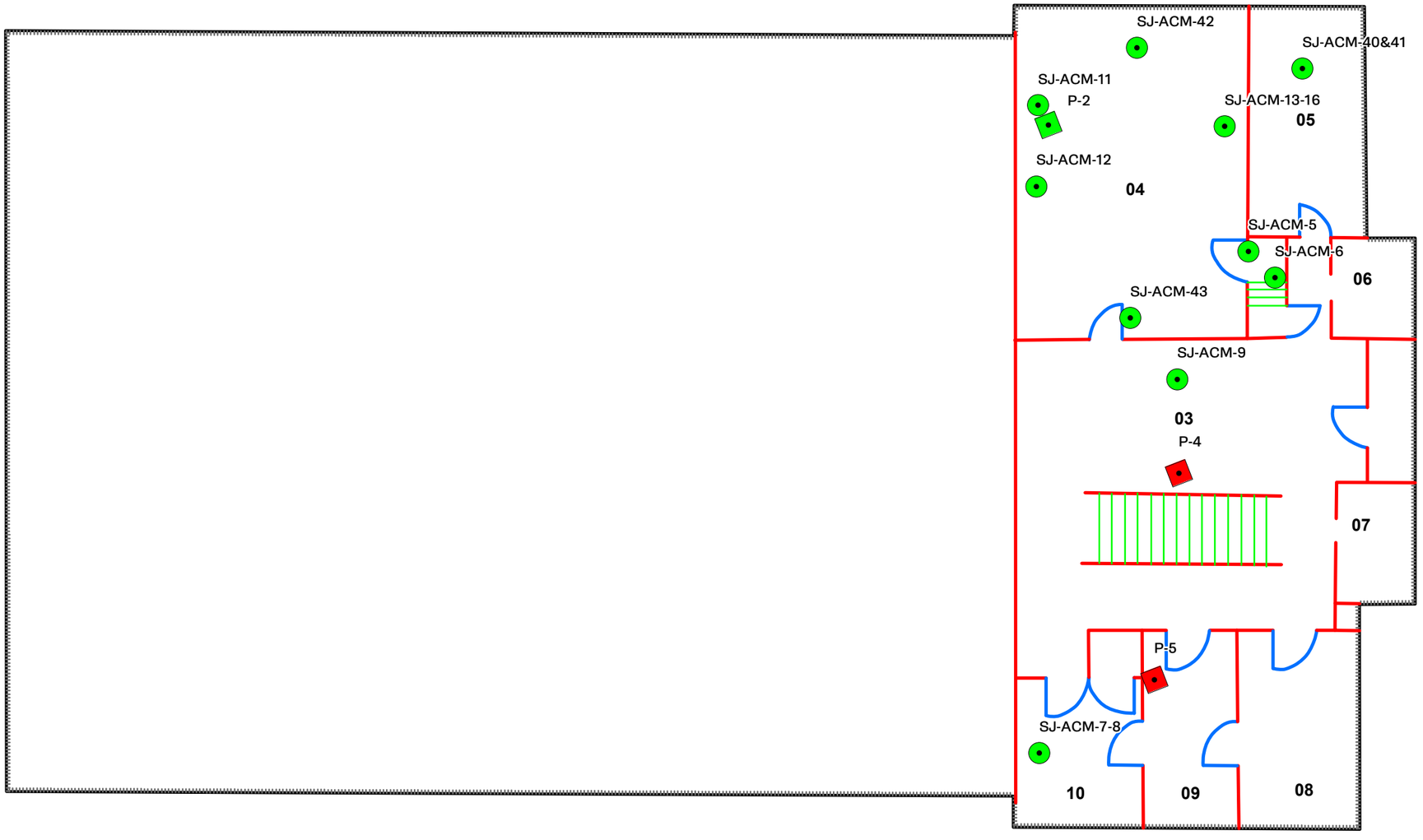
KGSNE

FIGURE 2B

FIRST FLOOR LAYOUT WITH SAMPLE DATA
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: NL	CHECKED BY: TA
PROJECT NO. 93203.11	DATE: MARCH 2021

\\nobis.local\shares\Projects\Active\93203.00 - START Contract - Task Order 03\93203.11 - St. Johnsbury Armory\GIS\Figure 4 St. Johnsbury Armory First Floor Data.mxd 3/9/2021 15:33 jstewart



Notes:

1. Samples with "SJ-ACM-#" sample IDs were collected by Nobis on 2/4/21.

2. Samples P-2, P-4 and P-5 were collected by Nobis on 2/3/21.

3. Room numbers are from the ATC Environmental Survey Report Room features may be represented differently than those in the survey.

4. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

Legend

- PCB Sample Location Result >1 ppm
- PCB Sample Location Result <1 ppm
- Asbestos Sampling Location Result "Non-Detect"
- 2nd Floor Door
- 2nd Floor Stairs
- 2nd Floor Wall
- Floor Footprint

0 5 10 20

Feet

1 inch = 10 feet

N

KGSNE

FIGURE 2C

SECOND FLOOR LAYOUT WITH SAMPLE DATA
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: NL	CHECKED BY: TA
PROJECT NO. 93203.11	DATE: MARCH 2021

\\nobis.local\shares\Projects\Active\93203.00 - START Contract - Task Order 03\93203.11 - St. Johnsbury Armory\GIS\Figure 5 St. Johnsbury Armory Second Floor Data.mxd 3/9/2021 15:26 jstewart

APPENDICES

APPENDIX A

Environmental Survey



Former Saint Johnsbury Armory
1249 Main Street
Saint Johnsbury, Vermont

Prepared for:

Ms. Gail Aloisio
Northeastern Vermont Development Association
36 Eastern Avenue, Suite 1
PO Box 630
St. Johnsbury, Vermont 05819

Prepared by:

Cardno ATC
171 Commerce Street, P.O. Box 1486
Williston, VT 05401

Cardno ATC Project No. 063.35078.0013

March 28, 2013

Table of Contents

1.0 BACKGROUND 1
2.0 FINDINGS 1
2.1 ASBESTOS SURVEY 1
2.1.1 Asbestos Quality Assurance/Quality Control 2
2.1.2 Asbestos Recommendations 2
2.2 PCB IN BUILDING MATERIALS SURVEY 3
2.2.1 PCB Quality Assurance/Quality Control 3
2.2.2 PCB Recommendations 3
2.3 LEAD BASED PAINT XRF SURVEY 3
2.3.1 Lead in Paint Quality Assurance/Quality Control 4
2.3.2 Lead in Paint Recommendations 4
2.4 LEAD IN DUST SAMPLING 5
2.4.1 Lead in Dust Quality Assurance/Quality Control 7
2.4.2 Lead in Dust Recommendations 7
2.5 Indoor Air Quality Investigation 7
2.5.1 IAQ Quality Assurance/Quality Control 10
2.5.2 IAQ Recommendations 10
2.6 SEDIMENT SAMPLING AND DYE TEST 10
2.6.1 Sediment Sampling Quality Assurance/Quality Control 11
2.6.2 Sediment Sampling and Dye Test Recommendations 11

Appendices

Site Diagram

Appendix A: Asbestos Sample Location Diagram
List of Suspect Asbestos-Containing Materials
Asbestos Laboratory Report
Appendix B: PCB Sample Location Diagram
List of Suspect PCB-Containing Materials
PCB Laboratory Report
Appendix C: Building Diagram with Room Numbers
XRF Field Sheets
XRF Protocol
Performance Characteristic Sheet
XRF QA/QC Results
Appendix D: Lead in Dust Sample Location Diagram
Lead in Dust Laboratory Report
Appendix E: Indoor Air Quality Sample Location Diagram
Indoor Air Quality Laboratory Reports
Appendix F: Diagram of Floor Drains and Sediment Sample Location
Sediment Sample Laboratory Reports

1.0 BACKGROUND

The following report documents the asbestos, polychlorinated biphenyls (PCBs), lead based paint (LBP), lead in dust, indoor air quality (IAQ), drain sediment sampling performed at the former Saint Johnsbury Armory facility, located at 1249 Main Street (the site) in Saint Johnsbury, Vermont. In addition the report documents the dye-testing results of the basement floor drain system.

The site is currently developed with the former St. Johnsbury Armory building, a three story masonry structure. The building is currently vacant and is located on an approximately 0.44 acre parcel. The property is located in downtown St. Johnsbury in an area with mix-use development. The property is located on the west side of Main Street and is bounded on the north and west by the Saint Andrews Episcopal Church and the Grace Methodist Church, respectively; a dentist's office to the south and to the east, across Main Street is the Passumpsic Savings Bank and several other small business'.

Pursuant to the Phase I Environmental Site Assessment (May 2012, the Johnson Company), the property has been developed since at least 1882, originally with four separate buildings. Apparently the current armory building was constructed circa 1916. Modern uses of the building include use by the St, Johnsbury Police Department, the American Red Cross and the St. Johnsbury Parks and recreation Department. The Phase I indicates that the Vermont National Guard last occupied the building in 1976.

Cardno ATC understands that the Saint Johnsbury History and Heritage Center is assessing the feasibility for redevelopment of the building into a possible office headquarters, education and museum space.

This US EPA Brownfields project was completed by Cardno ATC for the Northeastern Vermont Development Association (NVDA) and pursuant to the approved Site Specific Quality Assurance Project Plan (SSQAPP) Addenda F-1 dated November 28, 2012. The Scope of Work for this project as outlined in the SSQAPP was based on the findings of the Phase I Environmental Site Assessment completed for the site in May of 2012 (prepared by the Johnson Company).

2.0 FINDINGS

2.1 ASBESTOS SURVEY

Pursuant to the SSQAPP, all asbestos samples were collected pursuant to the Cardno ATC SOP F-SOP-1.12. This *baseline* asbestos survey was also conducted pursuant to ASTM method E2356-04 "Standard Practice for Comprehensive Building Asbestos Surveys". Samples were submitted to the Cardno ATC Asbestos Laboratory Division (NY, NY) for laboratory analysis via polarized light microscopy (PLM) analysis.

A *Baseline Survey* is a building-wide or facility wide inspection that provides a general sense of the overall location, type, quantity and conditions of asbestos –containing materials (ACM) present. The baseline survey provides information for long-term management of ACM and prioritization of response actions, however a baseline survey is unobtrusive in that walls and other barriers are not damaged (opened up) in order to collect samples. Therefore, it is possible that suspect ACM may be located behind walls other barriers (such as inside boilers, doors, etc.).

Previous asbestos sampling data from Crothers Environmental Group LLC's "Limited Interior Asbestos Inspection" report Dated November 1, 2008 was utilized and sampling data from the 2008 report was incorporated into this report. The fieldwork was conducted by Cardno ATC on December 10, 17, 18 and 28, 2012.

Asbestos bulk samples were analyzed by Polarized Light Microscopy (PLM). Asbestos Containing Material (ACM) is defined as material that contains any type of asbestos in an amount greater than 1% asbestos.

The following building materials were identified as ACM from this survey:

- **Air cell pipe insulation (Homogenous Material No. 24 [H 24])**
- **Mudded joint packings (H42)**

The following materials were found to previously be identified as ACM within the previous 2008 survey:

- **Plaster walls and ceilings (H11)**

The following materials have not been sampled (due to inaccessibility) and should be assumed to be ACM:

- **Door Insulation (H15)**
- **Fire Brick (H26)**
- **Vibration Cloth (H34)**
- **Boiler Door Insulation (H37)**
- **Boiler Internal Materials (H43)**

The following materials were found to contain trace amounts (<1%) of asbestos:

- **Exterior Window Caulking (H4)**
- **Exterior Tar Brick Caulking (H5)**

Appendix A of this report contains a listing of suspect asbestos containing materials, a sample location diagram and the asbestos laboratory hardcopy results.

2.1.1 Asbestos Quality Assurance/Quality Control

For the purposes of comparing duplicate samples, samples 01A and 01B (duplicate) were utilized. Both samples were below were below laboratory detection limits. Laboratory in-house QA/QC included duplicate analysis of 10% of samples by the original analyst as well as a duplicate analysis by a second analyst (recounts). All QA/QC laboratory recounts passed QA/QC requirements; the Data Entry sheet for the asbestos bulk sample laboratory recounts is included with the laboratory hardcopy results in **Appendix A**.

2.1.2 Asbestos Recommendations

- Prior to any renovations/demolition to the building, any asbestos containing materials that may be disturbed must be removed or abated as required (per State and Federal regulations).

- Suspect ACM may be enclosed or concealed in areas Cardno ATC did not access during this survey. If suspect materials that are not included in this survey are discovered during renovation / demolition activities, they shall be tested prior to disturbance.

- Materials containing “trace” amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to disturbance. Refer to “OSHA Standard Interpretation and Compliance Letter” dated 8/13/1999, subject: “Requirements for demolition operations involving material containing <1% asbestos”.

- Asbestos abatement activities must be performed by a Vermont certified abatement contractor following all applicable State and Federal regulations. Abatement activities should be designed by a Vermont certified asbestos project designer and overseen by a Vermont certified asbestos project monitor.

2.2 PCB IN BUILDING MATERIALS SURVEY

Pursuant to the SSQAPP, all PCB samples were collected pursuant to the Cardno ATC SOP F-SOP-1.17. Samples were submitted to EMSL Analytical, Inc. (Cinnaminson, NJ) for laboratory analysis via 3540C/8082A analysis. PCB bulk samples of suspect materials (oil paints, caulking or similar elastic sealant materials installed prior to 1978) were collected; a minimum of two bulk samples representative of each different homogeneous area of suspect material sampled were collected.

Cardno ATC visually inspected accessible areas of the facility for homogeneous groupings of suspect PCB containing materials. Only suspect (window and door caulking, paint, expansion joints etc.) materials installed prior to 1978 were investigated. Cardno ATC sampled ten (10) materials that are considered to be suspect for containing PCB's.

The EPA regulatory limit ("not authorized for use" under the Toxic Substances Control Act of 1976 [TSCA]) for PCBs in building materials is 50 parts per million (ppm).

The gray floor paint in the basement level (H16) was the only material identified during this survey as containing levels of PCBs in excess of 50 ppm. The PCB content of the gray paint was identified as containing levels up to 5,700 ppm.

Appendix B of this report contains a listing of suspect PCB materials, a PCB sample location diagram and PCB laboratory hardcopy results.

2.2.1 PCB Quality Assurance/Quality Control

Pursuant to the SSQAPP one duplicate PCB sample was collected. Sample number 16C (grey floor paint, H16) is a duplicate of sample number 16B (as well as 16A). The Relative Percent Difference (RPD) between samples 16B (5,600 ppm) and 16C (4,600) is 21%, which is within the RPD requirement of 50% pursuant to the SSQAPP. The RPD between samples 16A and 16C is 0%.

2.2.2 PCB Recommendations

- Additional PCB sampling should be conducted to determine to what extent, if any, of the PCBs from the flooring paint have leached into the concrete floor substrate. Required removal of PCB materials (such as the flooring paint) must be conducted pursuant to TSCA and may require an EPA approved work plan.

2.3 LEAD BASED PAINT XRF SURVEY

Pursuant to the SSQAPP, the XRF lead based paint (LBP) Survey was conducted pursuant to the Cardno ATC SOP F-SOP-1.19. The LBP XRF survey of the building was conducted on December 10 and 17, 2012. Lead based paint is defined as paint or other surface coatings that contain lead equal to or greater than 1.0 mg/cm^2 (by XRF).

A lead paint analyzer (XRF) was used to sample representative painted components and surfaces for lead content. The following **Table 1** summarizes the various components identified as LBP.

Table 1: Summary of XRF Lead in Paint Results						
Component	***Room No.***	***Condition***	***Substrate***	***Color***	***Location in Room***	***Result (mg/cm^2)***
Windows – All Components	Exterior	Good - Poor	Wood	White	All	>9.9 (maximum reading of instrument)
Side Porch	Exterior	Good	Wood	White	D side	3.0
Window Wells	Throughout Building	Good - Poor	Wood	White	All	>9.9 (maximum reading of instrument)
Wall	Room 21	Good	Brick	Blue	C side	3.0
Door	Room 21	Good	Metal	Green	C side	3.4
Floor	Throughout Basement	Fair - Poor	Concrete	Grey	All	1.5
Walls and Ceiling	Room 23	Good - Fair	Brick	Green	All	1.5
Walls	Room 24	Good - Poor	Brick	Green	All	3.0
Walls	Room 25	Good	Brick	White	All	3.0
Stair Riser	Room 25	Good	Wood	White	A side	1.1

Individual room by room testing results are contained on the field sheets included in **Appendix C** of this report.

2.3.1 Lead in Paint Quality Assurance/Quality Control

Pursuant to QA/QC procedures within the Cardno ATC SOP (F –SOP-1.19), QA/QC repeat testing was conducted on ten (10) surfaces. A procedure for calculating the retest tolerance limit is specified in the XRF instrument Performance Characteristic Sheet (PCS). The retest conducted by Cardno ATC was within the tolerance limit for the instrument.

Appendix C contains the room location diagram, field sheets, XRF instrument protocol, the repeated testing (QA/QC) results, and the PCS.

2.3.2 Lead in Paint Recommendations

- If Demolition/Renovation activities are planned that would disturb finish coatings, then appropriate work practices should be employed to satisfy the Lead in Construction OSHA Standard (1926.62), including but not limited to representative air monitoring to determine actual employee exposures.
- Copies of this report should be provided to the general contractor and demolition contractor to assist with compliance to VOSHA Lead in Construction Standard.
- Any abatement of lead hazards must be completed by a Vermont licensed lead abatement firm, pursuant to the Vermont Regulations for Lead Control.

- Subsequent to renovation/demolition activities a lead-specific final cleaning should be conducted in all areas and lead in dust sampling should be completed prior to building occupancy.

2.4 LEAD IN DUST SAMPLING

As required by the SSQAPP, lead-in-dust sampling was conducted pursuant to the Cardno ATC SOP F-SOP-1.20.

Cardno ATC collected lead in dust samples from representative locations throughout the facility on December 17, 2012. Lead in dust sampling was conducted to determine existing lead-in-dust levels and to determine potential impacts related to the reported use of the basement as an indoor firing range. On December 10, 2012, Cardno ATC interviewed St. Johnsbury Police Chief Clement Houde and Corporal Gil Roberts regarding the possible former use of the armory building and the location of the former firing range. According to Cpl. Roberts, the building has not included an indoor firing range since at the latest 1992. Upon review of the space, it was determined that the range was likely located in the basement in the vicinity of rooms 26, 27, and 28. Based on this finding, lead in dust samples numbers 13-20 were collected within rooms 26 – 28 (as well as other areas of the building).

Although lead in dust samples are not a regulatory requirement prior to renovation activities, the "clearance levels" contained in the Vermont Regulations for Lead Control (V.S.A. Title 18, Chapter 38) were utilized as de facto target levels for this project. The Vermont clearance levels are 40 µg/ft² for floor samples and 250 µg/ft² for interior window sills.

For lead-abatement projects in Vermont, work areas must be cleaned until clearance dust samples indicate levels of lead-in dust are below the clearance levels. The clearance levels are commonly utilized outside of lead-abatement projects as standards to determine if a response action is needed related to lead in dust contamination. All lead in dust samples were analyzed by EMSL Analytical, Inc. of Cinnaminson NJ by Analytical Method SW846-6010B/C ICP-AES. The following **Table 2** summarizes lead in dust sampling results

Table 2 : Pre Renovation Lead in Dust Sample Results

Sample Number	*Room # / Location*	*Floor*	*Lead Concentration (µg/ft²)*	*VT Clearance Level (µg/ft²)*
F-01	03-Floor	2nd	52	40
S-02	03 – Sill	2nd	86,000	250
F-03	08 – Floor	2nd	250	40
S-04	08 - Sill	2nd	20,000	250
F-05	04 - Floor	2nd	230	40
F-06	10 - Floor	2nd	130	40
F-07	12 - Floor	1st	2.7	40
S-08	12 - Sill	1st	1,200	250
F-09	16 - Floor	1st	21	40
S-10	16 - Sill	1st	4,300	250
F-11	17 - North Floor	1st	6	40
F-12	17 - South Floor	1st	7.5	40
F-13	26 - East Floor	Basement	430	40
F-14	26 - Center Floor	Basement	350	40
F-15	26 - West Floor	Basement	340	40
S-16	26 - East Sill	Basement	860	250
S-17	26 - Center Sill	Basement	1,800	250
S-18	26 - West Sill	Basement	390	250
F-19	28 - Floor	Basement	83	40
F-20	27 - Floor	Basement	260	40
F-21	29 - Floor	Basement	670	40
F-22	32 - Floor	Basement	590	40
F-23	21 - Floor	Basement	510	40
F-24	23 - Floor	Basement	2,600	40
F-25	Field Blank	NA	BDL	Not Applicable
F-26	Blind Spike*	NA	180 µg	Not Applicable

** - Spike Known Value of 232.6 µg*

As noted in **Table 2**, lead-in-dust results above target/clearance levels were identified in all levels of the building. Sample results above the target levels are shaded in **Table 2**; rooms where the former firing range was apparently located have also been highlighted (in yellow) in **Table 2.**

2.4.1 Lead in Dust Quality Assurance/Quality Control

Pursuant to QA/QC procedures within the SSQAPP Cardno ATC submitted one "blind" lead-in-dust spike sample (sample # F-26) with a known lead content of 232.6 µg. Pursuant to the SSQAPP the acceptance criteria is within +/- 30% of the known lead content (162.82 – 302.38 µg). The analysis result of the spike sample was 180 µg and therefore falls within the acceptance criteria. In addition, no lead was detected in the field blank (sample # F-25).

Appendix D contains the lead in dust sample location diagram (which includes the approximate location of the former firing range) and the lead in dust laboratory hardcopy results.

2.4.2 Lead in Dust Recommendations

- Copies of this report should be provided to the general contractor and demolition contractor to assist with compliance to VOSHA Lead in Construction Standard.
- Subsequent to renovation/demolition activities a lead-specific final cleaning should be conducted in all areas and lead in dust sampling should be completed prior to building occupancy.

2.5 Indoor Air Quality Investigation

Pursuant to the SSQAPP, Cardno ATC conducted air sampling for culturable fungi and total fungal structures in four (4) indoor locations and one (1) outdoor location for comparison. *The mold assessment was conducted pursuant to the Cardno ATC "Guidelines for Environmental Sampling for Microbial Contamination" (April 2002) hereby incorporated into the Cardno ATC Generic QAPP as Cardno ATC SOP F-SOP-1.21.*

Cardno ATC utilized an Andersen N6 sampler to collect the airborne culturable mold samples on malt extract agar plates for 5 minutes at a flow rate of approximately 27.29 liters per minute. Zefon Air-O-Cell™ microbial spore trap cassettes and a Buck Bio-Aire sampling pump (serial number B150547) were used to collect each sample of total airborne fungal structures for 10 minutes at a flow rate of 15 liters per minute. Both bioaerosol sampling techniques were calibrated prior to sample collection. Bulk (swab) samples were also collected in areas of apparent mold growth.

The air and bulk samples were submitted to EMSL Analytical Inc. of Cinnaminson NJ for analysis of predominant mold species and concentrations.

The American Conference of Governmental Industrial Hygienists (ACGIH) considers comparison of indoor/outdoor bioaerosol data a common method for evaluating indoor fungal reservoirs or concerns. In well maintained indoor environments, the total concentrations of fungi in the indoor air are commonly equal to, or less than, the total concentration outdoors. If indoor fungal bioaerosol concentrations are greater than those outdoors, then indoor fungal reservoirs are likely to be present (however winter conditions will generally result in lower outdoor levels). In addition, the types (i.e., taxa or groups) of fungal bioaerosols found inside a building should be qualitatively similar to the taxa recovered outdoors; presuming outdoor air is the only source of indoor fungal bioaerosols. There are no regulatory standards or other widely accepted numerical guidelines available for interpretation of bioaerosol data. Current ACGIH guidelines refrain from providing numerical thresholds for bioaerosols.

The following **Table 3** presents the total quantitative results for the culturable air samples:

Table 3: Culturable Sample Analysis			
Sample Number	***Location***	***Predominant Species***	***Total CFU/m^3***
IP-01	Exterior – North Door	*Penicillium*	98
IP-02	Room 3 – 2nd Floor	*Aspergillus*	210
IP-03	Room 11 – 1st Floor	*Aspergillus*	511
IP-04	Room 25 - Basement	*Aspergillus*	252
IP-05	Field Blank	*None Detected*	-

Predominant culturable species found indoors (Aspergillus) were different than the predominant species noted outdoors (Penicillium). The outdoor total was lower than indoor concentrations. Based on Cardno ATC's experience the indoor levels are not considered significantly elevated and due to ambient temperatures being at or below freezing (which would serve to reduce the total cultural spore concentrations and types found outside) it is not unusual for indoor levels to exceed outdoor levels under these conditions. The predominant types of fungi identified (inside and outside) are common types of fungi. Based on Cardno ATC's experience the culturable levels identified do not represent a significant concern.

The following **Table 4** presents the quantitative results for the total airborne fungal structure samples:

Table 4: Total Airborne Fungal Structure Sample Analysis

Sample Number	***Location***	***Predominant Species***	***Total Structures/m^3***
Z-01	Exterior – North Door	*Aspergillus/Penicillium*	611
Z-02	Room 3 – 2nd Floor	*Aspergillus/Penicillium*	577
Z-03	Room 11 – 1st Floor	*Aspergillus/Penicillium*	458
Z-04	Room 25 - Basement	*Aspergillus/Penicillium*	3,187
Z-05	Field Blank	*None Detected*	-

The predominant spore types found outdoors were similar to the indoor predominant types (Aspergillus/Penicillium) and except for the basement sample the totals were similar as well. The basement (room 25) level however, did indicate a possible amplification of Aspergillus/Penicillium fungal types.

The following **Table 5** presents the total qualitative results for the swab samples:

Table 5: Fungal Structure Swab Sample Analysis

Sample Number	***Location***	***Substrate***	***Area (ft^2)***	***Predominant Species***	***Category Count***
S-01	Room 16/11 – wall Bottom of Stairs	*Plaster*	*<1*	*Chaetomium*	High
				Penicillum	Medium
				Aspergillus	Rare
S-02	Room 03 – West Wall	*Plaster*	*<1*	*Penicillium/Aspergillus*	Rare
				Cladosporium	Rare
S-03	Room 16 – Ceiling	*Structural Wood*	*25*	*None Detected*	-
S-04	Field Blank	*Not Applicable*	*Not Applicable*	*None Detected*	-

As noted in Table 5 above, only limited areas of apparent visual fungal growth were noted by Cardno ATC Swab samples (samples S-01, S-02 and S-03) were collected from areas of apparent growth. Analysis of swab samples for fungal spores and structures indicated the presence of common fungal structures on only two of the three swab samples. Extensive fungal growth was not observed by Cardno ATC within the building. **Appendix E** includes the fungi sample location diagram and laboratory hardcopy results of the fungi sampling.

2.5.1 IAQ Quality Assurance/Quality Control

Indoor air quality sampling was conducted pursuant to Cardno ATC's "Guidelines for Environmental Sampling for Microbial Contamination". One field blank sample was collected for each type of fungal analysis. No contamination was noted on any of the field blank samples.

2.5.2 IAQ Recommendations

- If significant fungal growth is identified during renovation/demolition activities, removal of the growth should be conducted pursuant to the EPA document Mold Remediation in Schools and Commercial Buildings (EPA 402-K-01-001).
- Subsequent to renovation/demolition activities a final HEPA cleaning should be conducted in the basement area.
- Any sources of water infiltration should be corrected. Continued water infiltration (such as roof leaks) would likely cause additional IAQ related problems. If renovations are not planned for the near-future, additional mold sampling may be warranted.

2.6 SEDIMENT SAMPLING AND DYE TEST

Cardno ATC conducted an investigation related to the presence of the floor drain system in the basement, to help determine potential impacts to the subsurface related to potential vehicle maintenance previously conducted in the basement level. The investigation included a visual inspection of the drain system, interviewing individuals with knowledge of the building's historical use, sampling of sediment in the floor drain itself, as well as performing a dye tracing test to determine the discharge location of the drain system.

The floor drain system in the basement consists of and exterior catch basin adjacent to the southwest entrance, an abandoned trench drain in the southwest corner, a floor drain to the north of the trench drain, a sump pump adjacent to the floor drain and a clean-out pit in the northeast corner of the basement. All the basement catch basins and sump/pump appear to discharge tot the main wastewater line for the building which runs along the north wall and to the cleanout-pit (see dye-test results below). **Appendix F** contains a diagram of the configuration of the floor drain system.

On December 10, 2012, Cardno ATC interviewed St. Johnsbury Police Corporal Gil Roberts regarding the drainage configuration in the vicinity of room 28. Cpl. Roberts described the Police Department's historical use of the room (vehicle maintenance, cleaning, and storage) as well as drainage patterns during use.

The visual examination and Cpl. Roberts' description both indicated that wastewater entering the floor drain in room 28 flows north into the sump at the north end of room 28. A sump pump lifts that water into the building main wastewater line in room 29. From room 29, the main wastewater line runs east along the north wall of the basement, until it reaches a cleanout/trap in a pit in the northeast corner of room 21. From there it continues generally east to the city sewer under Main St.

On December 17, 2012, sediment samples from the floor drain in room 28 were collected to be analyzed for the following analytes: diesel range organics (S-01) via EPA SW-846 Method 8015B – DRO., mercury (S-03) via EPA SW-846 Method 7471B, metals (S-05) via EPA SW-846 Method 6010 C and volatile organic compounds (S-07) via EPA SW-846 Method 8260B. Duplicate samples were collected of each (S-02, S-04, S-06, and S-08, respectively). All sediment samples were collected pursuant to Cardno ATC's standard operating procedure F-SOP-1.7. The results of the sediment sampling were compared to the Soil Screening Values (SSVs) for industrial and commercial properties as listed in the Vermont Department of Environmental Conservation's "Investigation and Remediation of Contaminated Properties

Procedures". **Sediment concentrations of arsenic and bromomethane exceeded the SSVs.** It should be noted that concentrations of four analytes were identified in S-08 (duplicate) that were not identified in S-07. None of these additional detections exceeded the relevant SSV. A summary of sediment sample detections (from the initial sediment samples) are provided in the following **Table 6**:

Table 6: Sediment Sample Detections

Sample Number	*Analyte*	*Result*	*SSV*	*Unit*
S-01	DRO*	120	1,000	mg/kg
S-03	Mercury	0.063	43	mg/kg
S-05	Antimony	0.54	410	mg/kg
S-05	Arsenic	2.5	1.6	mg/kg
S-05	Beryllium	0.38	2,000	mg/kg
S-05	Cadmium	0.45	800	mg/kg
S-05	Chromium	19.3	103	mg/kg
S-05	Copper	56.4	41,000	mg/kg
S-05	Lead	62.1	800	mg/kg
S-05	Nickel**	20.1	20,000	mg/kg
S-05	Zinc	101	310,000	mg/kg
S-07	Bromomethane	37	32	µg/kg
S-07	Acetone	310	630,000	µg/kg
S-07	Methyl acetate	120	1,000,000	µg/kg

* - Diesel Range Organics, compared to the SSV for Total Petroleum Hydrocarbons

On December 18, 2013, a dye test was performed to confirm the discharge point of the building wastewater system. Hugh Wescott of the St. Johnsbury Department of Public Works (DPW) visited the site. Mr. Wescott indicated that he has no knowledge of any wastewater discharge from the armory building other than the main wastewater line to the city sewer. DPW provided access to a sewer junction (manhole) downstream of the armory. Dyed water was released into the cleanout in the northeast corner of room 21. Approximately six minutes later, dye was observed flowing through the downstream manhole, located east of the site in a parking lot off of Route 2 (this downstream manhole location is depicted on the Site Diagram).

The results of this investigation indicate the likelihood that any pollutant captured by the floor drain system in room 28 would have been discharged to the city wastewater system and it would be unlikely that a significant impact to the subsurface has occurred on site.

2.6.1 Sediment Sampling Quality Assurance/Quality Control

The sediment sampling was conducted pursuant to the Cardno ATC "Standard Procedure, Sediment Sampling" hereby incorporated into the Cardno ATC Generic QAPP as Cardno ATC SOP F-SOP-1.7. Of analytes that were detected in the sediment samples, only acetone (a common laboratory contaminant) was found in excess of the relative percent difference requirements established in the QAPP. It should be noted that, due to laboratory equipment malfunctions, analysis of the VOC duplicate samples was completed outside of the holding time. However, due to the relative consistency between the initial and duplicate samples Cardno ATC considers the data to be valid.

2.6.2 Sediment Sampling and Dye Test Recommendations

Results of the investigation indicate elevated levels of some pollutants in the floor drain sediment. Any sediment (likely less than on 55-gallon drum) associated with the floor drain system should be excavated and disposed of according to all applicable state and federal regulations.

Signatures of Environmental Professionals

Cardno ATC has performed above activities in general conformance with the project QAPP (Addenda F-1) for the Former St. Johnsbury Armory located in St. Johnsbury, VT.

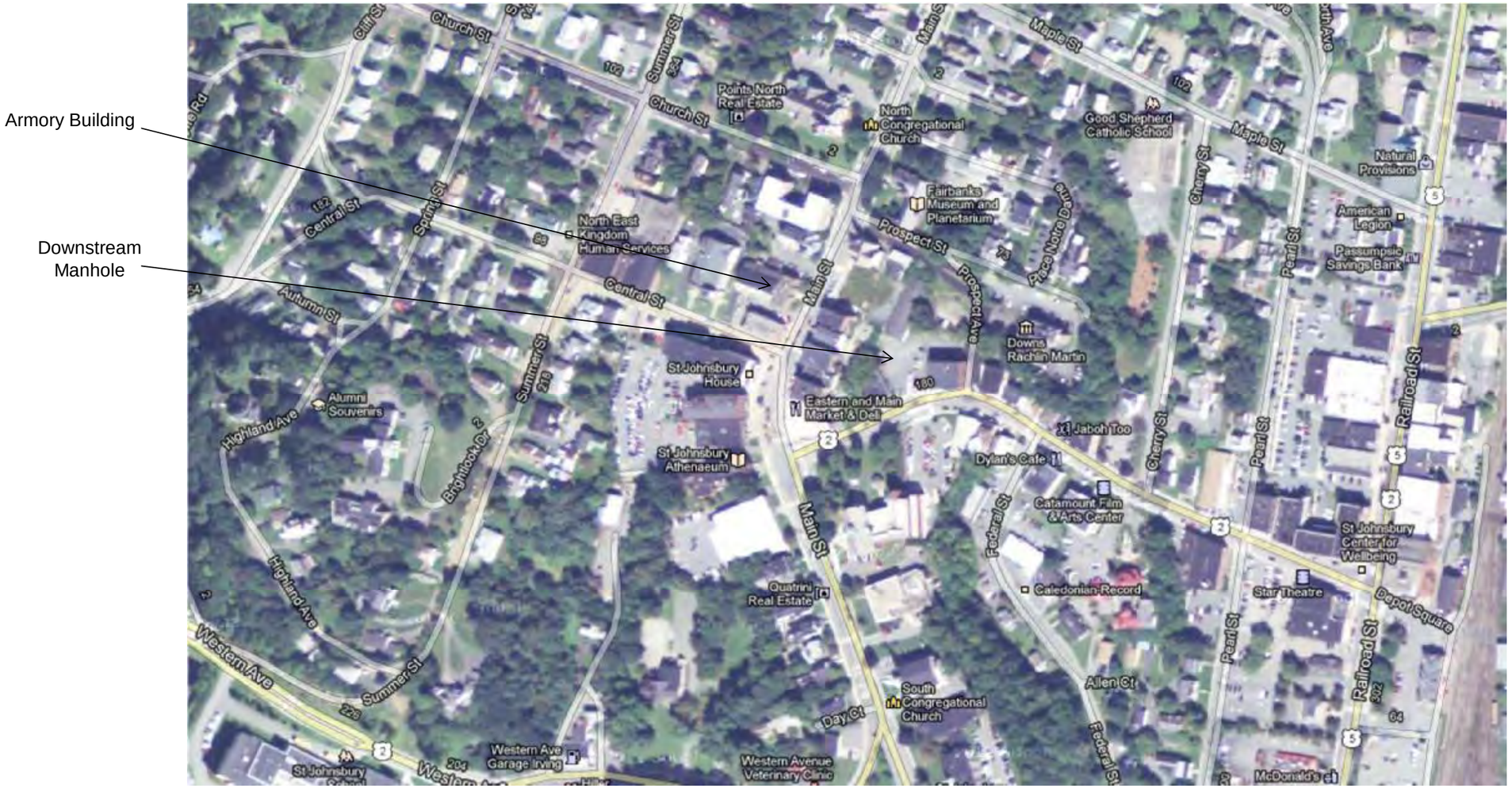
CARDNO ATC

Harland Miller
Senior Environmental Technician

Devin Porter
Senior Environmental Technician

Andra Liberty
Project Manager

Stephen Znamierowski
Senior Project Manager



SITE LOCATION DIAGRAM

Address: St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

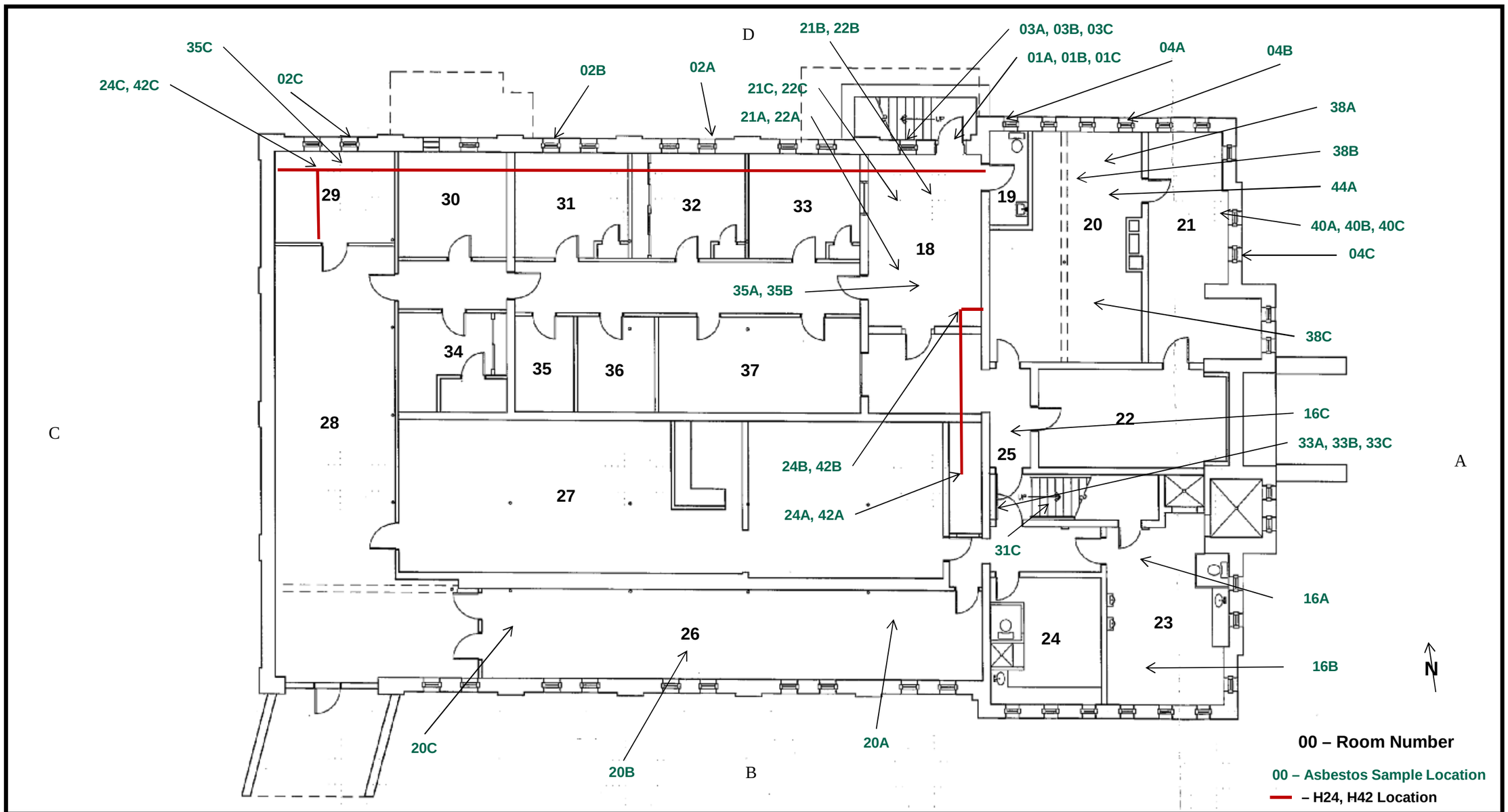
SOURCE : Field Notes

SCALE: Unknown

Appendix A

Asbestos Sample Location Diagram
List of Suspect Asbestos-Containing Materials
Asbestos Laboratory Report

Asbestos Sample Location Diagram



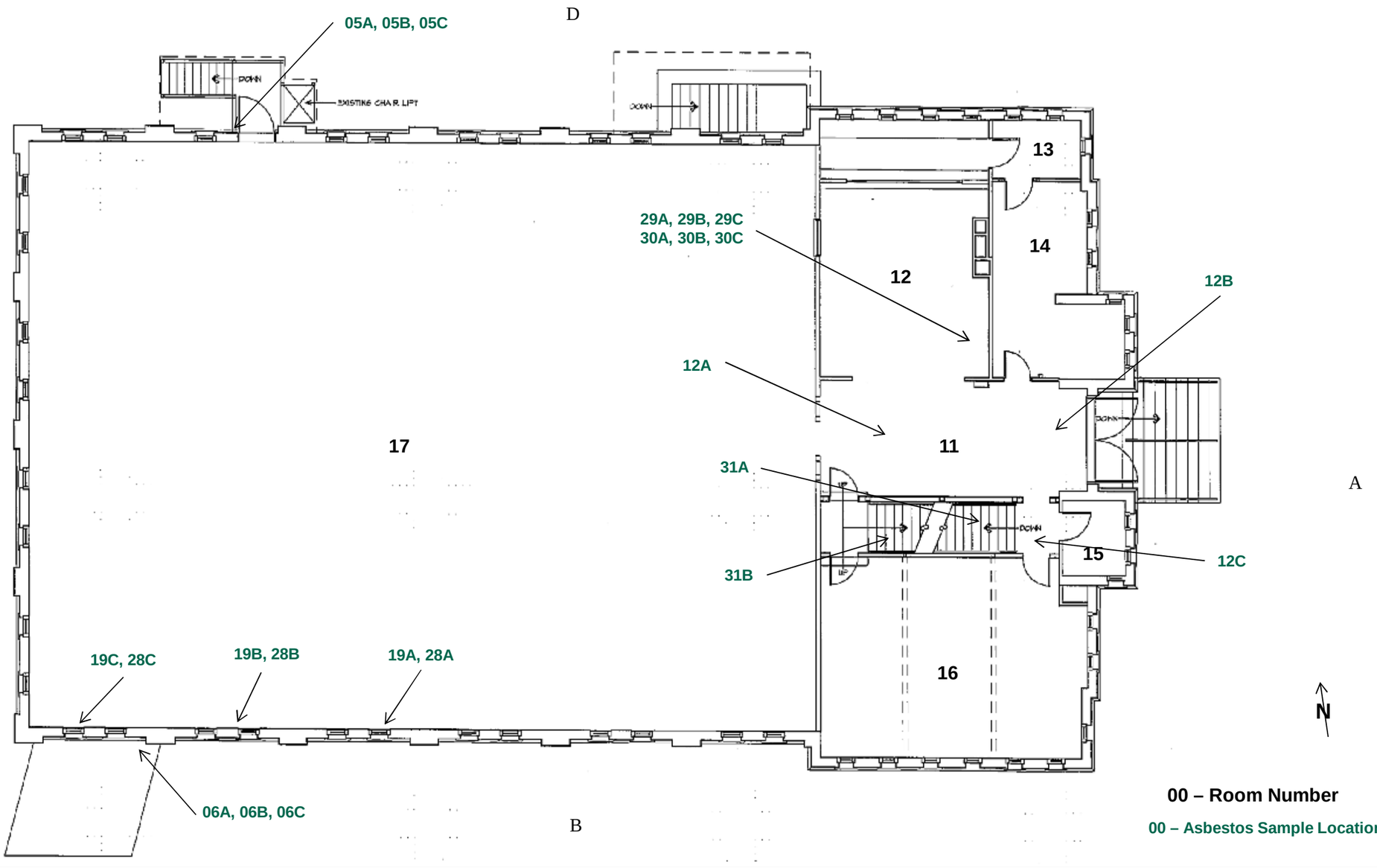
SAMPLE LOCATION DIAGRAM – Asbestos

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM – Asbestos

Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

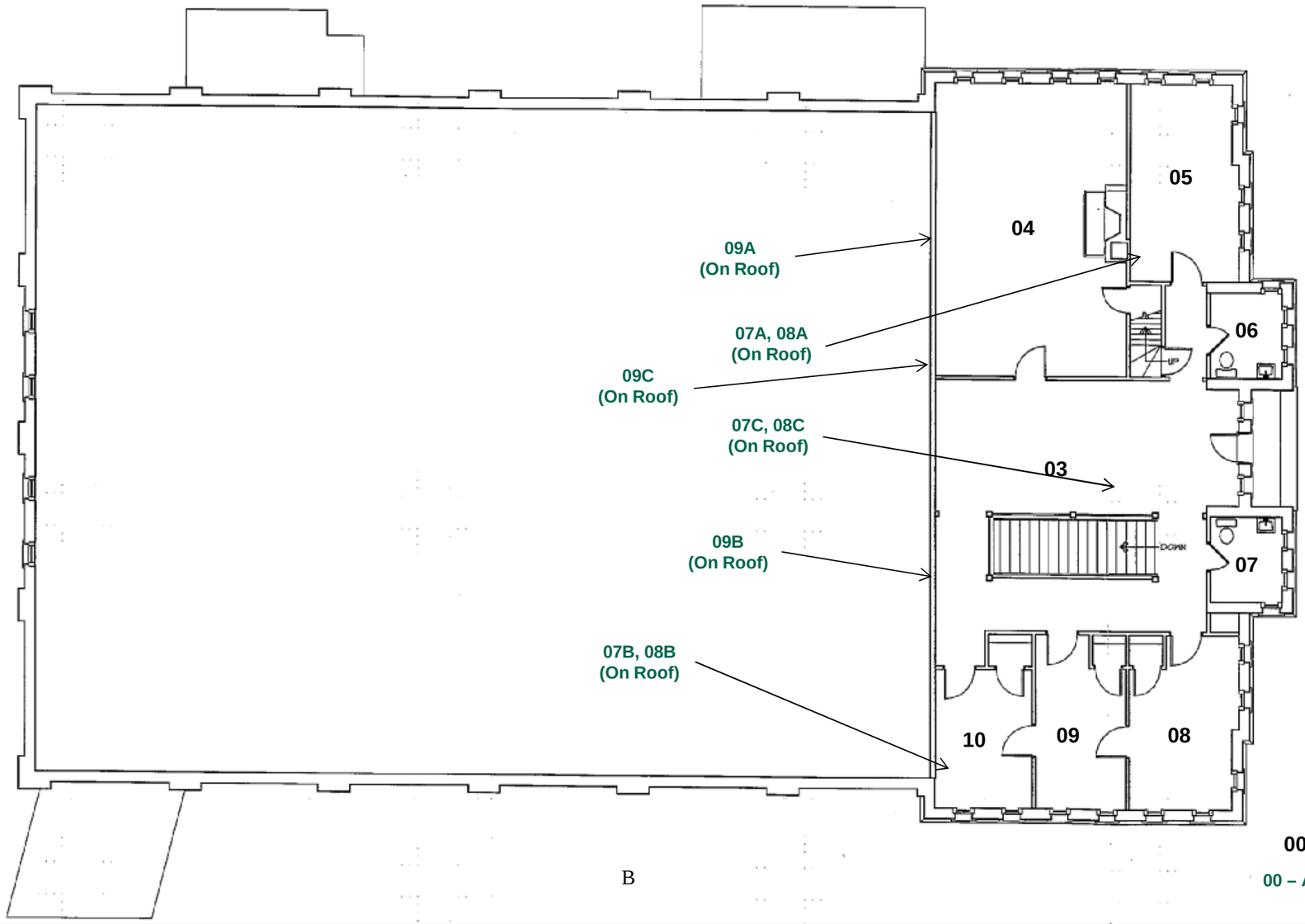
SOURCE : Field Notes

SCALE: Not to scale

D

C

A



B

00 – Room Number

00 – Asbestos Sample Location

SAMPLE LOCATION DIAGRAM – Asbestos

Address: St. Johnsbury Armory – 2nd Floor & Roof
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

List of Suspect Asbestos-Containing Materials

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H1	Door Caulking – Exterior Gray	ND*	01A-01C	NA
H2	Window Caulking – Exterior White	ND*	02A-02C	NA
H3	Window Glazing – Exterior White		03A-03C	NA
H4	**Window Caulking – Exterior White**	**Trace***	**04A-04C**	**NQ Exterior window to brick**
H5	**Tar Brick Caulking - Exterior**	**Trace***	**05A-05C**	**NQ Exterior under roof edge**
H6	Flashing- Exterior Silver	ND*	06A-06 C	NA
H7	Roof Field – Built up pebble and Tar	ND*	07A-07C	NA
H8	Roofing Felt	ND*	08A-08C	NA
H9	Caulk at Gambrel Flashing – Exterior Black	ND*	09A-09C	NA
H10	2x4 Ceiling tile – Worms and Pinholes	ND	Previously Sampled	NA
H11	**Plaster Walls and Ceilings**	**2%**	**Previously Sampled**	**NQ Throughout facility**
H12	Carpet Mastic	ND*	12A-12C	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H13	Gypsum Wall Board	ND	Previously Sampled	NA
H14	Joint Compound	ND	Previously Sampled	NA
H15	**Door Insulation**	**Assumed Positive**	**NS**	**1 Safe door Basement**
H16	Floor Paint - Gray	ND*	16A-16C	NA
H17	Decorative Coating	ND*	17A-17C	NA
H18	Ceiling Tile Panels – 4x4 Gypsum	ND*	Previously Sampled	NA
H19	Wall Paint - White	ND*	19A-19C	NA
H20	Floor Paint - Blue	ND*	20A-20C	NA
H21	12x12 Floor Tile - Beige	ND*	21A-21C	NA
H22	Mastic associated with H21	ND*	22A-22C	NA
H23	Carpet Mastic	ND*	Previously Sampled	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing “trace” amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to “OSHA Standard Interpretation and Compliance Letter” dated 8/13/1999, subject: “Requirements for demolition operations involving material containing <1% asbestos”.

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H24	**Aircell Pipe Insulation – 6" OD**	**40%**	**24A-24C**	**~100 LF Throughout basement maybe enclosed within walls & some debris on abated pipes**
H25	2x4 Ceiling Tile – Pressed Board	ND	Previously Sampled	NA
H26	**Brick associated with Fire place**	**Assumed Positive**	**NS**	**30 SF Second floor**
H27	2x4 Ceiling Tile – Worm & Pinholes	ND*	Previously Sampled	NA
H28	Wall Coating – Window Sill White	ND*	28A-28C	NA
H29	Resilient Sheet Flooring – Blue & Maroon	ND*	29A-29C	NA
H30	Mastic associated with H29	ND*	30A-30C	NA
H31	Stair Tread Risers – Black	ND*	31A-31C	
H32	Boiler Insulation – Block type blue tinted	ND	Previously Samples	NA
H33	Glue Dabs – Brown	ND*	33A-33C	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H34	Vibration Cloth	**Assumed Positive**	**NS**	**4 SF** **Basement/Gym**
H35	Blown-in Insulation	ND*	35A-35C	NA
H36	Boiler Insulation – Skim Coat	ND	Previously Samples	NA
H37	**Boiler Door Insulation**	**Assumed Positive**	**NS**	**4 SF** **Basement boiler room on boiler**
H38	Debris on Boiler, Exhaust, Duct & Hot water tank	ND*	38A-38C	NA
H39	Mastic on Concrete Floor	ND*	Previously Sampled	NA
H40	Pipe Putty	ND*	40A-40C	NA
H41	Sheet Flooring – Brown	ND*	Previously Sampled	NA
H42	**Mudded Joint Packing**	**33%**	**42A-42C**	**10 LF** **Throughout basement**

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

List of Suspect Asbestos Containing Homogeneous Materials
Former St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont
December 10, 2012
ATC Project # 63.35078.0013

Homogeneous Material	Description	% Asbestos	Sample Number	Approx. Quantities
H43	**Boiler Internal Materials**	**Assumed Positive**	**NS**	**NQ** **Boiler Room on boiler**
H44	Boiler Gasket	ND*	44A	NA

ND = Non Detected by Polarized Light Microscopy (PLM)
NA= Not Applicable NQ = Not Quantified

* - PLM is not consistently reliable for detecting asbestos in non-friable organically bound (NOB) materials (e.g. floor tiles, roofing, mastics). Therefore if PLM analysis has concluded that asbestos was not detected in a non-friable organically bound material, Quantitative TEM with NOB prep is the recommended analytical method that should be used to confirm that a material is negative.

Trace: Materials containing "trace" amounts of asbestos (<1%) are not considered Asbestos Containing Materials (ACM) by the US EPA and many state agencies. However, certain sections of OSHA standard 29 CFR 1926.1101 apply when such materials are subject to demolition. Refer to "OSHA Standard Interpretation and Compliance Letter" dated 8/13/1999, subject: "Requirements for demolition operations involving material containing <1% asbestos".

Asbestos Laboratory Report

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Client: ATC ASSOCIATES INC. - VERMONT
171 COMMERCE ST., PO BOX 1486
WILLISTON , VT 05495
Fax: (802) 862-1405 **Phone:** (802) 862-1980

Project: NVDA

Sample Date : 12/19/2012
Date Received : 12/20/2012
Date Analyzed : 12/21/2012
ATC Batch # 25538
Methods: EPA 600/M4-82-020
ELAP 198.1, 198.6 and 198.4

Location: ST. JOHNSBURY ARMORY, MAIN ST., ST. J., VERMONT
Project # 63.35078.0013

Bulk Asbestos Analysis Results

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
01A	NORTH DOOR BASEMENT LEVER.	DOOR CAULKING GRAY (EXTERIOR)	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		NONE DETECTED
25538 -1		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
01B	NORTH DOOR BASEMENT LEVER.	DOOR CAULKING GRAY (EXTERIOR)	PLM	Trace% Cellulose	25% Mineral Filler 75% Organic Binders		NONE DETECTED
25538 -2		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
01C	NORTH DOOR BASEMENT LEVER.	DOOR CAULKING GRAY (EXTERIOR)	PLM	Trace% Cellulose	27% Mineral Filler 73% Organic Binders		NONE DETECTED
25538 -3		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
02A	NORTH SIDE CENTER WINDOW	WINDOW CAULKING - WHITE (EXTERIOR)	PLM	Trace% Cellulose	18% Mineral Filler 82% Organic Binders		NONE DETECTED
25538 -4		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
02B	NORTH SIDE WEST END 1ST FLOOR	WINDOW CAULKING - WHITE (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -5		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
02C	NORTH WEST CORNER WINDOW	WINDOW CAULKING - WHITE (EXTERIOR)	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		NONE DETECTED
25538 -6		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
03A	NORTH SIDE @ STAIRS BASEMENT LEVEL	WINDOW GLAZING (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -7		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
03B	SOUTH SIDE BASEMENT BY STAIRS	WINDOW GLAZING (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -8		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			
03C	SOUTH SIDE, EAST CORNER	WINDOW GLAZING (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -9		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			
04A	NORTH SIDE CENTER OF FRONT BLDG.	WINDOW CAULKING WHITE (EXTERIOR)	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		Trace Chrysotile
25538 -10		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
04B	WINDOW BY STAIRS NORTH SIDE	WINDOW CAULKING WHITE (EXTERIOR)	PLM	Trace% Cellulose	28% Mineral Filler 72% Organic Binders		Trace Chrysotile
25538 -11		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
04C	FRONT OF BLDG. NE CORNER	WINDOW CAULKING WHITE (EXTERIOR)	PLM	Trace% Cellulose	32% Mineral Filler 68% Organic Binders		Trace Chrysotile
25538 -12		Color: WHITE					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
05A	@ NORTH DOOR (GYM)	TAR COATING ON BRICK (EXTERIOR)	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		Trace Chrysotile
25538 -13		Color: BLACK					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
05B	@ NORTH DOOR (GYM)	TAR COATING ON BRICK (EXTERIOR)	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		Trace Chrysotile
25538 -14		Color: BLACK					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
05C	@ NORTH DOOR (GYM)	TAR COATING ON BRICK (EXTERIOR)	PLM	Trace% Cellulose	23% Mineral Filler 77% Organic Binders		Trace Chrysotile
25538 -15		Color: BLACK					
Analyzed By: Amr Fata				Comments: NOB recommended			**Total Asbestos: TRACE** [13]
06A	@ SOUTH GARAGE	SILVER COATED FLASHING (EXT. ROOF)	PLM		21% Mineral Filler 79% Organic Binders		NONE DETECTED
25538 -16		Color: SILVER					
Analyzed By: Amr Fata				Comments: NOB recommended			
06B	@ SOUTH GARAGE	SILVER COATED FLASHING (EXT. ROOF)	PLM		18% Mineral Filler 82% Organic Binders		NONE DETECTED
25538 -17		Color: SILVER					
Analyzed By: Amr Fata				Comments: NOB recommended			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
06C	@ SOUTH GARAGE	SILVER COATED FLASHING (EXT. ROOF)	PLM		20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -18		Color: SILVER		Comments: NOB recommended			
Analyzed By: Amr Fata							
07A	@ HATCH	BUILT-UP TAR - ROOF	PLM	Trace% Cellulose	32% Mineral Filler 68% Organic Binders		NONE DETECTED
25538 -19		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
07B	@ SOUTH PARAPET DRAIN	BUILT-UP TAR - ROOF	PLM	Trace% Cellulose	35% Mineral Filler 65% Organic Binders		NONE DETECTED
25538 -20		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
07C	@ CENTER OF ROOF	BUILT-UP TAR - ROOF	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -21		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
08A	SEE #07A	ROOFING FELT	PLM	Trace% Cellulose	18% Mineral Filler 82% Organic Binders		NONE DETECTED
25538 -22		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
08B	SEE #07B	ROOFING FELT	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		NONE DETECTED
25538 -23		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
08C	SEE #07C	ROOFING FELT	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		NONE DETECTED
25538 -24		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
09A	@ GAMBREL N.	BLACK CAULK @ GAMBREL	PLM	Trace% Cellulose	15% Mineral Filler 85% Organic Binders		NONE DETECTED
25538 -25		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
09B	@ GAMBREL S.	BLACK CAULK @ GAMBREL	PLM	Trace% Cellulose	15% Mineral Filler 85% Organic Binders		NONE DETECTED
25538 -26		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
09C	@ GAMBREL CENTER	BLACK CAULK @ GAMBREL	PLM	Trace% Cellulose	15% Mineral Filler 85% Organic Binders		NONE DETECTED
25538 -27		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
12A	ROOM 11 WEST END	CARPET MASTIC (1ST FLOOR)	PLM	11% Cellulose	17% Mineral Filler 72% Organic Binders		NONE DETECTED
25538 -28		Color: BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
12B	ROOM 11 @ STAIRS	CARPET MASTIC (1ST FLOOR)	PLM	8% Cellulose	17% Mineral Filler 75% Organic Binders		NONE DETECTED
25538 -29		Color: BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
12C	ROOM 11 OUTSIDE RM. 15	CARPET MASTIC (1ST FLOOR)	PLM	10% Cellulose	20% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -30		Color: BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
16A	ROOM 23 @ DOOR TO STAIRS	FLOOR PAINT GRAY (BASEMENT)	PLM	Trace% Cellulose	10% Mineral Filler 90% Paint		NONE DETECTED
25538 -31		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
16B	ROOM 23 SOUTH END	FLOOR PAINT GRAY (BASEMENT)	PLM	Trace% Cellulose	12% Mineral Filler 88% Paint		NONE DETECTED
25538 -32		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
16C	ROOM 25 @ ROOM 22	FLOOR PAINT GRAY (BASEMENT)	PLM	Trace% Cellulose	13% Mineral Filler 87% Paint		NONE DETECTED
25538 -33		Color: GRAY		Comments: NOB recommended			
Analyzed By: Amr Fata							
19A	SAME AS 28C	WALL PAINT WHITE (ON BRICK)	PLM	Trace% Cellulose	15% Mineral Filler 85% Paint		NONE DETECTED
25538 -34		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
19B	SAME AS 28B	WALL PAINT WHITE (ON BRICK)	PLM	Trace% Cellulose	15% Mineral Filler 85% Paint		NONE DETECTED
25538 -35		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
19C	SAME AS 28A	WALL PAINT WHITE (ON BRICK)	PLM	Trace% Cellulose	15% Mineral Filler 85% Paint		NONE DETECTED
25538 -36		Color: WHITE		Comments: NOB recommended			
Analyzed By: Amr Fata							
20A	ROOM 26 @ DOOR	FLOOR PAINT BLUE (BASEMENT)	PLM		12% Mineral Filler 88% Paint		NONE DETECTED
25538 -37		Color: BLUE		Comments: NOB recommended			
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
20B	ROOM 26 CENTER	FLOOR PAINT BLUE (BASEMENT)	PLM		10% Mineral Filler		
25538 -38					90% Paint		NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE		Comments: NOB recommended			
20C	ROOM 26 WEST END	FLOOR PAINT BLUE (BASEMENT)	PLM		11% Mineral Filler		
25538 -39					89% Paint		NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE		Comments: NOB recommended			
21A	ROOM 18 CENTER	12X12 FLOOR TILE - BEIGE	PLM		53% Mineral Filler 47% Organic Binders		
25538 -40							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
21B	ROOM 18 @ ROOM 19	12X12 FLOOR TILE - BEIGE	PLM		53% Mineral Filler 47% Organic Binders		
25538 -41							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
21C	ROOM 18 @ WEST SIDE CENTER	12X12 FLOOR TILE - BEIGE	PLM		51% Mineral Filler 49% Organic Binders		
25538 -42							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
22A	SAME AS 21A	MASTIC W/H21	PLM	Trace% Cellulose	10% Mineral Filler 90% Organic Binders		
25538 -43							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			
22B	SAME AS 21B	MASTIC W/H21	PLM	Trace% Cellulose	8% Mineral Filler 92% Organic Binders		
25538 -44							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			
22C	SAME AS 21C	MASTIC W/H21	PLM	Trace% Cellulose	10% Mineral Filler 90% Organic Binders		
25538 -45							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			
24A	ROOM 27 SAFE AREA	6" OD AIR CELL PIPE INSULATION	PLM	45% Cellulose	15% Mineral Filler		40% Chrysotile
25538 -46							
Analyzed By: Amr Fata		Color: GRAY		Comments:			**Total Asbestos: 40 %**
24B							
25538 -47							NOT ANALYZED
				Comments: Positive stop, see #24A			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
24C							
25538 -48							NOT ANALYZED
				Comments: Positive stop, see #24A			
28A	SOUTH SIDE GYM @ CENTER WINDOW	COATING ON BRICK AS WINDOW SILL	PLM	Trace% Cellulose	20% Mineral Filler 80% Organic Binders		
25538 -49							NONE DETECTED
Analyzed By: Amr Fata		Color: GRAY		Comments: NOB recommended			
28B	SOUTH SIDE GYM @ SW WINDOW	COATING ON BRICK AS WINDOW SILL	PLM	Trace% Cellulose	22% Mineral Filler 78% Organic Binders		
25538 -50							NONE DETECTED
Analyzed By: Amr Fata		Color: GRAY		Comments: NOB recommended			
28C	SOUTH SIDE GYM @ SW CORNER	COATING ON BRICK AS WINDOW SILL	PLM	Trace% Cellulose	24% Mineral Filler 76% Organic Binders		
25538 -51							NONE DETECTED
Analyzed By: Amr Fata		Color: GRAY		Comments: NOB recommended			
29A	ROOM 12 EAST WALL	RSF - BLUE & MAROON	PLM	Trace% Cellulose	38% Mineral Filler 62% Organic Binders		
25538 -52							NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE/MAROON		Comments: NOB recommended			
29B	ROOM 12 EAST WALL	RSF - BLUE & MAROON	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		
25538 -53							NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE/MAROON		Comments: NOB recommended			
29C	ROOM 12 EAST WALL	RSF - BLUE & MAROON	PLM	Trace% Cellulose	34% Mineral Filler 66% Organic Binders		
25538 -54							NONE DETECTED
Analyzed By: Amr Fata		Color: BLUE/MAROON		Comments: NOB recommended			
30A	SAME AS 29A	MASTIC ASSOC. W/H29	PLM		8% Mineral Filler 92% Organic Binders		
25538 -55							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
30B	SAME AS 29B	MASTIC ASSOC. W/H29	PLM		6% Mineral Filler 94% Organic Binders		
25538 -56							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			
30C	SAME AS 29C	MASTIC ASSOC. W/H29	PLM		10% Mineral Filler 90% Organic Binders		
25538 -57							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE		Comments: NOB recommended			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
31A	FIRST FLOOR @ BOTTOM OF STAIRS	STAIR RISERS BLACK	PLM	6% Cellulose	20% Mineral Filler 74% Organic Binders		NONE DETECTED
25538 -58		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
31B	FIRST FLOOR @ TOP OF STAIRS	STAIR RISERS BLACK	PLM	7% Cellulose	23% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -59		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
31C	BASEMENT STAIRS	STAIR RISERS BLACK	PLM	8% Cellulose	22% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -60		Color: BLACK		Comments: NOB recommended			
Analyzed By: Amr Fata							
33A	ROOM 25 @ SAFE DOOR	GLUE DABS LT. BROWN	PLM	10% Cellulose	15% Mineral Filler 75% Organic Binders		NONE DETECTED
25538 -61		Color: LT.BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
33B	ROOM 25 @ SAFE DOOR	GLUE DABS LT. BROWN	PLM	12% Cellulose	18% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -62		Color: LT.BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
33C	ROOM 25 @ SAFE DOOR	GLUE DABS LT. BROWN	PLM	10% Cellulose	20% Mineral Filler 70% Organic Binders		NONE DETECTED
25538 -63		Color: LT.BROWN		Comments: NOB recommended			
Analyzed By: Amr Fata							
35A	ROOM 18 CENTER	BLOWN IN INSULATION	PLM	Trace% Cellulose 90% FiberGlass	10% Mineral Filler		NONE DETECTED
25538 -64		Color: LT.GRAY		Comments:			
Analyzed By: Amr Fata							
35B	ROOM 18 CENTER	BLOWN IN INSULATION	PLM	Trace% Cellulose 85% FiberGlass	15% Mineral Filler		NONE DETECTED
25538 -65		Color: LT.GRAY		Comments:			
Analyzed By: Amr Fata							
35C	ROOM 29 EAST SIDE	BLOWN IN INSULATION	PLM	Trace% Cellulose 88% FiberGlass	12% Mineral Filler		NONE DETECTED
25538 -66		Color: LT.GRAY		Comments:			
Analyzed By: Amr Fata							
38A	TOP OF BOILER RM. 20	DEBRIS	PLM	2% Cellulose	98% Mineral Filler		NONE DETECTED
25538 -67		Color: BEIGE					
Analyzed By: Amr Fata							

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type
38B	TOP OF HOT WATER TANK RM. 20	DEBRIS	PLM	3% Cellulose	97% Mineral Filler		
25538 -68							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE					
38C	TOP OF EXHAUST RM. 20	DEBRIS	PLM	4% Cellulose	96% Mineral Filler		
25538 -69							NONE DETECTED
Analyzed By: Amr Fata		Color: BEIGE					
40A	EAST WALL CENTER RM. 21	PUTTY ON PIPE	PLM	Trace% Cellulose	28% Mineral Filler 72% Organic Binders		
25538 -70							NONE DETECTED
Analyzed By: Amr Fata		Color: DK.GRAY		Comments: NOB recommended			
40B	EAST WALL CENTER RM. 21	PUTTY ON PIPE	PLM	Trace% Cellulose	30% Mineral Filler 70% Organic Binders		
25538 -71							NONE DETECTED
Analyzed By: Amr Fata		Color: DK.GRAY		Comments: NOB recommended			
40C	EAST WALL CENTER RM. 21	PUTTY ON PIPE	PLM	Trace% Cellulose	32% Mineral Filler 68% Organic Binders		
25538 -72							NONE DETECTED
Analyzed By: Amr Fata		Color: DK.GRAY		Comments: NOB recommended			
42A	SAME AS 24A	MJP 6" OD ASSOC. W/H24	PLM	Trace% Cellulose	67% Mineral Filler		33% Chrysotile
25538 -73							
Analyzed By: Amr Fata		Color: LT.GRAY					**Total Asbestos: 33 %**
42B							
25538 -74							NOT ANALYZED
				Comments: Positive stop, see #42A			
42C							
25538 -75							NOT ANALYZED
				Comments: Positive stop, see #42A			
44A	@ FRONT OF BOILER	BOILER GASKET	PLM	2% Cellulose 5% FiberGlass	10% Mineral Filler 83% Organic Binders		
25538 -76							NONE DETECTED
Analyzed By: Amr Fata		Color: BLACK		Comments: NOB recommended			

ATC ASSOCIATES INC
104 E. 25th Street, 10th Floor
New York, NY 10010
Tel. 212-353-8280
Fax: 212-353-8306

Sample #	Location	Type of Material	Method	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	NOB % Type	Asbestos % Type

NOTES:

1) The Limit of Detection is the same as the Reporting Limit for these results.

2) The Reporting Limit (RL) is the Limit of Quantitation. For point counts the limit of quantitation of 0.25%; based on one asbestos point counter over 400 non-empty points.

3) Asbestos Containing Material (ACM) Definition: > 1% asbestos by weight is considered an ACM

4) Disclaimer: The laboratory is not responsible for sample collection. Please refer to enclosed letter. This report may not be reproduced, except in full, without written approval by ATC Associates Inc. This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. This report relates only to the samples reported above as described in the chain of custody. Quality control data is available upon request.

5) Accredited by NVLAP #101187-0 and by NY State ELAP #10679

6) Confidentiality Notice: The document(s) contained herein are confidential and privileged information, intended for the exclusive use of the individual or entity named above.

7) Liability Notice: ATC Associates Inc. and its personnel shall not be liable for any misinformation provided to us by the client regarding these samples. This report relates only to samples submitted and analyzed.

8) When the results display more than three digits, only the first three are significant. The data within this report is reliable to 3 significant figures.

9) The condition of all samples was acceptable upon receipt.

10) The laboratory certifies that the test results meet all requirements of NELAC.

11) Supplement to test report batch # _____. Amendments: ____. Amendment Dates: _____. Amended by: _____

12) PLM Letter is attached on this report.

13) TRACE: The result is reported as Trace when No points are counted and asbestos is identified. For ELAP Trace is < 1%.

14) ATC certifies that this report is an accurate and authentic report of the results obtained from the laboratory analysis

15) The uncertainty for these test results is available upon request.

16) Assume ACM if Vermiculite is ≥ 10%. Not Reported Vermiculite means Not Detected

Amr Fata

Analyst:

Milena Bonezzi M. Bonezzi

Approved by
Laboratory Director:

BULK ASBESTOS ANALYSIS RESULTS

PLM Analysis Methodology

The samples were analyzed by industry accepted methods in accordance with EPA and ELAP methods using Polarized Light Microscopy (PLM) with dispersion staining in conjunction with stereoscopical analysis. Point counts are performed on samples regulated by these agencies. The Environmental Laboratory Approval Program (ELAP) has determined that analysis of non-friable organically bound materials (i.e. floor tile, roofing, etc.) and ceiling tiles with cellulose is not reliable when performed by Polarized Light Microscopy (PLM) method. Therefore, if this analysis included that of non-friable materials or ceiling tiles with cellulose under PLM and the results were negative, ATC must add this disclaimer to maintain our ELAP accreditation:

" Polarized light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing" .

Non-friable samples that contained *Trace* or *No* PLM detectable asbestos are classified as Inconclusive. Samples that are layered and analyzed by the gravimetric method as composites (NESHAP, AHERA) should be considered positive if results are between trace and 1%, unless every layer is analyzed separately.

ELAP requires that materials containing vermiculite at 10% or more must be reported as ACM.

EPA does not regulate mixed mineral assemblage like the anthophyllite-talc intergrowth that is found in paint and caulking unless these materials contain asbestos in an amount greater than 1%. Anthophyllite detected in paint and caulking samples might be a talc intergrowth.

ATC has the capability of performing TEM confirmation if so desired.

All bulk sample reports are checked and reviewed two times. Unused portions of samples are archived for three months unless client requests special handling. This report must not be used by the client to claim product endorsement by NIST or any agency of the U.S. government.

ATC Associates Inc. is not responsible for sample collection and analytical procedures not performed by our laboratory. This report may not be reproduced in part without the laboratory permission.

ATC Associates will not be liable for analytical results from samples that are not prepared according to the standard methods (EPA, ELAP, etc.) used by the laboratory (e.g. composite samples from different locations, samples with insufficient volumes, straight TEM samples without gravimetric procedures, dust samples, non-friable samples by PLM only).

Laboratory Equipment

Laboratory analysis was accomplished utilizing Olympus BH-2 Microscopes.

Quality Control

ATC Associates Inc. is accredited by NVLAP (Lab Code 101187-0) and NY State DOH ELAP (Lab ID 10879) for bulk and air fiber analyses. ATC participates in the Bulk Asbestos Sample Quality Assurance Programs for NVLAP and ELAP and maintains an in-house QC/QA program for bulk samples whereby 10% of all submitted samples are reanalyzed and documented in a Quality Control Manual. ATC also participates in a quarterly round robin QC/QA program for bulk samples with several accredited laboratories throughout the United States. Current and past QC/QA program results are available in the laboratory for inspection.

Accuracy and Precision

The phase abundances provided by point count may be considered within the limits of variability inherent in the method employed. For point counts the detection limit of 0.25% is based on one asbestos point counted over 400 non-empty points. If no points are counted and asbestos is identified, the result will be reported as trace. For ELAP trace is < 1%.

The analyses were supervised by Milena Bonezzi, Director of Laboratory Services, who has extensive experience in asbestos analysis by PLM and other methods. Please contact me regarding any questions relating to these materials at 212-353-8280 Ext. 247.

1. EPA Methods: 600/M4-82-020 and 600/R-93/116
2. ELAP Method: 4088 Items 198.1 and 198.4 and 198.6

Sincerely,

Milena Bonezzi
ATC Associates Inc.
Director of Laboratory Services

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vel mont / Main St I, Vel mont Project Number: 63-35078-0013

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538 TEMPERATURE °c: 25

1 Field Number 1A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Gray Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	22 Mineral Filler; FB Organic Binders; 0 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

2 Field Number 1B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Gray Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	25 Mineral Filler; FB Organic Binders; 0 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☑ AF		NOB PLM: ____

3 Field Number 1C	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Gray Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	27 Mineral Filler; FB Organic Binders; 0 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

4 Field Number 2A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color White Texture NF; Homogenity 2; # of Layers 2; Color of Layer ____; Asbestos Detected Yes ☐ No ☑; Comments:	Morphology ____ Extinction ____; RI ⊥ ____ RI ∥ ____; DS Color ____ Color, Pleo ____; Biref ____ Sign ____	____ Chrysotile; ____ Amosite; ____ Other; ☐ Assume ACM if ≥10% Vermiculite	TR Cellulose; ____ Fiberglass; ____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	14 Mineral Filler; 82 Organic Binders; 4 Vermiculite; ____ Other	____ Organic; ____ NA Residue Nlr; ____ Carbonate; ____ Vermiculite; ____ NA Residue Fr; ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

	1	2	3	4
Field Number	2B	2C	3A	3B
Stereoscopic Exam				
Color	White	White	White	White
Texture	NF	NF	NF	NF
Homogenity	4	4	4	4
# of Layers	1	1	1	1
Color of Layer	—	—	—	—
Asbestos Detected Yes	☐	☐	☐	☐
Asbestos Detected No	☑	☑	☑	☑
Comments:				
PLM Optical Properties	Morphology, Extinction, RI ⊥, RI ∥, DS Color, Color, Pleo, Biref, Sign			
Asbestos Results PLM %	_____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite			
Other Fibrous %	TR Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐			
Non Fibrous %	20 Mineral Filler; 80 Organic Binders; 0 Vermiculite; _____ Other	22 Mineral Filler; 78 Organic Binders; 0 Vermiculite; _____ Other	20 Mineral Filler; 80 Organic Binders; 0 Vermiculite; _____ Other	20 Mineral Filler; 80 Organic Binders; 0 Vermiculite; _____ Other
Gravimetric (NOB) Results %	_____ Organic; _____ NA Residue Nfr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos			
Gravimetric (NOB)	Required ☐	Recommended ☑	Gravimetric PREP ☐	Gravimetric (NOB) PLM ☐	Gravimetric (NOB) TEM ☐
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			
Q.C. ☐	NOB PLM: _____			

L:\LAB_FORMS,DOCUMENTS AND RECORDS\OPTICAL\ASBESTOS_BULK\ASBESTOS BULK FORMS 2012\BULK ASBESTOS ANALYSIS SHEET_FORM #B2.doc
REVISION #23 10/25/12 BY MEI WANG FORM #B2

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

BULK ASBESTOS ANALYSIS SHEET

Client / Project: Ave Vermont / Main St P, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 3C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	___ Chrysotile	TR Cellulose	20 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI ∥: ___ ___ ___	___ Amosite	___ Fiberglass	80 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☑	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

---

2 Field Number: 4A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: W ___ ___ Extinction: ⊥ ___ ___	TR Chrysotile	TR Cellulose	30 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: 1550 ___ ___ RI ∥: 1557 ___ ___	___ Amosite	___ Fiberglass	70 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M ___ ___ Color, Pleo: Nil ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: L ___ ___ Sign: + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

---

3 Field Number: 4B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: W ___ ___ Extinction: ⊥ ___ ___	TR Chrysotile	TR Cellulose	28 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: 1548 ___ ___ RI ∥: 1554 ___ ___	___ Amosite	___ Fiberglass	72 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M ___ ___ Color, Pleo: Nil ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: L ___ ___ Sign: + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

---

4 Field Number: 4C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: White Texture: NF	Morphology: W ___ ___ Extinction: ⊥ ___ ___	TR Chrysotile	TR Cellulose	32 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥: 1549 ___ ___ RI ∥: 1554 ___ ___	___ Amosite	___ Fiberglass	68 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M ___ ___ Color, Pleo: Nil ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected: Yes No	Biref: L ___ ___ Sign: + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	___ Other	___ Vermiculite ___ NA Residue Fr ___ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK — Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☑ AF TMcM		NOB PLM: ___

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vel mont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: SA

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Black Texture: NF	Morphology: W Extinction: II		Th Chrysotile	Th Cellulose	20 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: 1.550 RI II: 1.556		_____ Amosite	_____ Fiberglass	50 Organic Binders	_____ NA Residue Nfr
Gravimetric PREP ☐	# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M Color, Pleo: NP		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: L Sign: +		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

2 Field Number: SB

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Black Texture: NF	Morphology: W Extinction: II		TR Chrysotile	TR Cellulose	22 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: 1.549 RI II: 1.554		_____ Amosite	_____ Fiberglass	78 Organic Binders	_____ NA Residue Nfr
Grevimetric PREP ☐	# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M Color, Pleo: NP		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: L Sign: +		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

3 Field Number: SC

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Black Texture: NF	Morphology: W Extinction: II		TR Chrysotile	TR Cellulose	23 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: 1.548 RI II: 1.554		_____ Amosite	_____ Fiberglass	77 Organic Binders	_____ NA Residue Nfr
Gravimetric PREP ☐	# of Layers: 1 Asbestos: ☑ ☐	DS Color: B/M Color, Pleo: NP		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: L Sign: +		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

4 Field Number: 6A

Stereoscopic Exam		PLM Optical Properties		Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB)							
Required ☐	Color: Silver Texture: NF	Morphology: _____ Extinction: _____		_____ Chrysotile	_____ Cellulose	21 Mineral Filler	_____ Organic
Recommended ☑	Homogenity: 4	RI ⊥: _____ RI II: _____		_____ Amosite	_____ Fiberglass	79 Organic Binders	_____ NA Residue Nfr
Gravimetric PREP ☐	# of Layers: 1 Asbestos: ☐ ☑	DS Color: _____ Color, Pleo: _____		_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Gravimetric (NOB) PLM ☐	Color of Layer: —	Biref: _____ Sign: _____		☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Gravimetric (NOB) TEM ☐	Detected: Yes / No				Fiberglass Isotopic ☐		_____ NA Residue Fr
	Comments:				Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2				Q.C. ☐		NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vel mont / Main St J, Vel mont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 6B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Silver Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	____ Cellulose	13 Mineral Filler	____ Organic
Homogenity: M	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	82 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

2 Field Number: 6C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Silver Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	____ Cellulose	20 Mineral Filler	____ Organic
Homogenity: ____	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	80 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	OS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

3 Field Number: 7A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Black Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	TR Cellulose	32 Mineral Filler	____ Organic
Homogenity: ____	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	68 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

4 Field Number: 7B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Black Texture: NF	Morphology ____ ____ ____ Extinction ____ ____ ____	____ Chrysotile	TR Cellulose	35 Mineral Filler	____ Organic
Homogenity: ____	RI ⊥ ____ ____ ____ RI ∥ ____ ____ ____	____ Amosite	____ Fiberglass	65 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color ____ ____ ____ Color, Pleo ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected Yes No	Biref ____ ____ ____ Sign ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:					
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2		Q.C. ☐		NOB PLM: ____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number 9C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

30 Mineral Filler
70 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number 8A

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

18 Mineral Filler
82 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☑ AF

NOB PLM: _____

---

3 Field Number 8B

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

20 Mineral Filler
80 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number 8C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Black Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

Th Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

22 Mineral Filler
76 Organic Binders
2 Vermiculite
_____ Other

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nlr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 — Field Number 9A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	85 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer 1 Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

2 — Field Number 9B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	85 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer 1 Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

3 — Field Number 9C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	85 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Asume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

4 — Field Number 12A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Brown Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	11 Cellulose	17 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	72 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 12B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Brown Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	8 Cellulose	17 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	75 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	____ Other	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

---

2 Field Number: 12C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Brown Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	10 Cellulose	20 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	70 Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	____ Other	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

---

3 Field Number: 16A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Gray Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	TR Cellulose	10 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	____ Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	90 Other paint	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

---

4 Field Number: 16B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Gray Texture: NF	Morphology: ___ ___ ___ Extinction: ___ ___ ___	____ Chrysotile	TR Cellulose	12 Mineral Filler	____ Organic
Homogenity: 4	RI ⊥: ___ ___ ___ RI II: ___ ___ ___	____ Amosite	____ Fiberglass	____ Organic Binders	____ NA Residue Nfr
# of Layers: 1 Asbestos: ☐ ☒	DS Color: ___ ___ ___ Color, Pleo: ___ ___ ___	____ Other	____ Other	0 Vermiculite	____ Carbonate
Color of Layer: ____ Detected: Yes / No	Biref: ___ ___ ___ Sign: ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	88 Other paint	____ Vermiculite
Comments:			Fiberglass Isotopic ☐		____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		____ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 16C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: Gray Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: — Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

13 Mineral Filler
_____ Organic Binders
0 Vermiculite
87 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number: 19A

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: White Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: _____ Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☐
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

15 Mineral Filler
_____ Organic Binders
0 Vermiculite
85 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☑ AF

NOB PLM: _____

---

3 Field Number: 19B

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: White Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: _____ Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

15 Mineral Filler
_____ Organic Binders
0 Vermiculite
85 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number: 19C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam

Color: White Texture: NF
Homogenity: 4
# of Layers: 1 Asbestos ☐ ☑
Color of Layer: _____ Detected Yes No

Comments:

PLM Optical Properties

Morphology _____ Extinction _____
RI ⊥ _____ RI II _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %

_____ Chrysotile
_____ Amosite
_____ Other

☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %

TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %

15 Mineral Filler
_____ Organic Binders
0 Vermiculite
85 Other paint

Gravimetric (NOB) Results %

_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC.

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 20A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	12 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers: ___ Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	88 Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐	paint	___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number: 20B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	10 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	6 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	90 Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐	paint	___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

3 Field Number: 20C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	11 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	89 Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐	paint	___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number: 21A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Beige Texture: NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	53 Mineral Filler	___ Organic
Homogenity: 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	47 Organic Binders	___ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer: ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___		Cellulose Ondulose Extinction ☐	___ Other	___ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations:
NVLAP 101167-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 21B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Beige Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Comments:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	___ Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	53 Mineral Filler 47 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

2 Field Number 21C	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Beige Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Comments:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	___ Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	51 Mineral Filler 49 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

3 Field Number 22A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Black Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Comments:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	Tr Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	10 Mineral Filler 90 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

4 Field Number 22B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Grsvimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color Black Texture NF Homogenity 4 # of Layers 1 Asbestos ☐ ☑ Color of Layer — Detected Yes No Commente:	Morphology ___ Extinction ___ RI ⊥ ___ RI II ___ DS Color ___ Color, Pleo ___ Biref ___ Sign ___	___ Chrysotile ___ Amosite ___ Other ☐ Assume ACM if ≥10% Vermiculite	Tr Cellulose ___ Fiberglass ___ Other Cellulose Undulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	8 Mineral Filler 92 Organic Binders 0 Vermiculite ___ Other	___ Organic ___ NA Residue Nfr ___ Carbonate ___ Vermiculite ___ NA Residue Fr ___ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ___

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

BULK ASBESTOS ANALYSIS SHEET

Client / Project: Ave Vermont / Main St E. Vermont Project Number: _____

Analysis Date: 2/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 22C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	TR Cellulose	10 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	90 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☒	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☒	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☒ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

2 Field Number 24A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture F	Morphology W ___ ___ Extinction 11 ___ ___	40 Chrysotile	45 Cellulose	15 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ 1558 ___ ___ RI ∥ 1556 ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☒ ☐	DS Color B/M ___ ___ Color, Pleo M ___ ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer C Detected Yes No	Biref C ___ ___ Sign + ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☒	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☒ AF 33% Chr NOB PLM: _____

3 Field Number 24B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☐	___ Other	___ Vermiculite
Comments: 4 stop See # 24A			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

4 Field Number 24C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ ___ ___ Extinction ___ ___ ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ ___ ___ RI ∥ ___ ___ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ ___ ___ Color, Pleo ___ ___ ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ ___ ___ Sign ___ ___ ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Ondulose Extinction ☐	___ Other	___ Vermiculite
Comments: 4 stop See # 24A			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 28A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	20 Mineral Filler	_____ Organic
Homogenity 4	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	80 Organic Binders	_____ NA Residue Mfr
# of Layers 1	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer _____	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

2 Field Number 28B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	22 Mineral Filler	_____ Organic
Homogenity 4	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	78 Organic Binders	_____ NA Residue Mfr
# of Layers 1	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer _____	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

3 Field Number 28C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Gray Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	24 Mineral Filler	_____ Organic
Homogenity 4	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	76 Organic Binders	_____ NA Residue Mfr
# of Layers _____	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer 1	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

4 Field Number 29A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Blue/Maroon Texture NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	38 Mineral Filler	_____ Organic
Homogenity N	RI ⊥ _____ RI ∥ _____	_____ Amosite	_____ Fiberglass	62 Organic Binders	_____ NA Residue Mfr
# of Layers 1	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer _____	Biref _____ Sign _____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Asbestos Detected Yes ☐ No ☑			Fiberglass Isotopic ☐		_____ NA Residue Fr
Comments:			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐ NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10679

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ave Vermont / Main St E. Vermont Project Number: _____

Analysis Date: 2/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 29B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue/Maroon Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	30 Mineral Filler	_____ Organic
Homogenity: M	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	70 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

---

2 Field Number: 29C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Blue/Maroon Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	TR Cellulose	34 Mineral Filler	_____ Organic
Homogenity: M	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	66 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☑	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

---

3 Field Number: 30A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Beige Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	_____ Cellulose	5 Mineral Filler	_____ Organic
Homogenity: H	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	92 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	2 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

---

4 Field Number: 30B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color: Beige Texture: NF	Morphology _____ Extinction _____	_____ Chrysotile	_____ Cellulose	6 Mineral Filler	_____ Organic
Homogenity: H	RI ⊥ _____ RI II _____	_____ Amosite	_____ Fiberglass	94 Organic Binders	_____ NA Residue Nfr
# of Layers: 1 Asbestos ☐ ☑	DS Color _____ Color, Pleo _____	_____ Other	_____ Other	0 Vermiculite	_____ Carbonate
Color of Layer: — Detected Yes / No	Biref _____ Sign _____		Cellulose Undulose Extinction ☐	_____ Other	_____ Vermiculite
Comments:		☐ Assume ACM if ≥10% Vermiculite	Fiberglass Isotopic ☐		_____ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		_____ Asbestos

Gravimetric (NOB): Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☑ AF — NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 — Field Number 30C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Beige; Texture NF; Homogenity 4; # of Layers _____; Color of Layer 1; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: _____ Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☐; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 10 Mineral Filler; 90 Organic Binders; 0 Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

2 — Field Number 31A

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Black; Texture NF; Homogenity 4; # of Layers 2; Color of Layer _____; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: 6 Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 20 Mineral Filler; 74 Organic Binders; 0 Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

3 — Field Number 31B

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Black; Texture NF; Homogenity 4; # of Layers 1; Color of Layer _____; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: 7 Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 23 Mineral Filler; 70 Organic Binders; _____ Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

4 — Field Number 31C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam: Color Black; Texture NF; Homogenity 4; # of Layers 2; Color of Layer _____; Asbestos Detected Yes ☐ No ☑; Comments:

PLM Optical Properties: Morphology _____; Extinction _____; RI ⊥ _____; RI ∥ _____; DS Color _____; Color, Pleo _____; Biref _____; Sign _____

Asbestos Results PLM %: _____ Chrysotile; _____ Amosite; _____ Other; ☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %: 8 Cellulose; _____ Fiberglass; _____ Other; Cellulose Undulose Extinction ☑; Fiberglass Isotopic ☐; Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %: 22 Mineral Filler; 70 Organic Binders; 0 Vermiculite; _____ Other

Gravimetric (NOB) Results %: _____ Organic; _____ NA Residue Nlr; _____ Carbonate; _____ Vermiculite; _____ NA Residue Fr; _____ Asbestos

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

Accreditations:
NVLAP 101167-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

BULK ASBESTOS ANALYSIS SHEET

Client / Project: Ate Vermont / Main St E, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AR Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 33A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Brown Texture NF Homogenity NA # of Leyers 1 Color of Layer — Asbestos Detected Yes ☐ No ☑ Comments:	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	10 Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	15 Mineral Filler 75 Organic Binders 0 Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

2 Field Number 33B	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Brown Texture NF Homogenity NA # of Layers 1 Color of Layer — Asbestos Detected Yes ☐ No ☑ Comments:	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	12 Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	18 Mineral Filler 70 Organic Binders 0 Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

3 Field Number 33C	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Brown Texture NF Homogenity 4 # of Layers ____ Color of Layer — Asbestos Detected Yes ☐ No ☑ Comments:	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	10 Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☑ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	20 Mineral Filler 70 Organic Binders 0 Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

4 Field Number 34A	Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color L - Gre Texture ____ Homogenity ____ # of Layers ____ Color of Layer ____ Asbestos Detected Yes ☐ No ☐ Comments: NO Sample	Morphology Extinction RI ⊥ RI II DS Color Color, Pleo Biref Sign	____ Chrysotile ____ Amosite ____ Other ☐ Assume ACM if ≥10% Vermiculite	____ Cellulose ____ Fiberglass ____ Other Cellulose Ondulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Mineral Filler ____ Organic Binders ____ Vermiculite ____ Other	____ Organic ____ NA Residue Nfr ____ Carbonate ____ Vermiculite ____ NA Residue Fr ____ Asbestos
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations:
NVLAP 101187-0
ELAP 10879

Microscopes:
OLYMPUS BH-2 /
NIKON OPTIPHOT

Client / Project: Ale Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number: 3SA

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: L-Gray Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	TR Cellulose	10 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	90 Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☒ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

2 Field Number: 3SB

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: L-Gray Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	TR Cellulose	15 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	85 Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☒ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

3 Field Number: 3SC

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: L-Gray Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	TR Cellulose	12 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	88 Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☒ Fiberglass Isotopic ☒ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☒ AF		NOB PLM: ____

4 Field Number: 3SA

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐	Color: Beige Texture: F	Morphology: ____ ____ ____ Extinction: ____ ____ ____	____ Chrysotile	2 Cellulose	98 Mineral Filler	____ Organic
	Homogenity: Y	RI ⊥: ____ ____ ____ RI II: ____ ____ ____	____ Amosite	____ Fiberglass	____ Organic Binders	____ NA Residue Nfr
	# of Layers: 1 Asbestos: ☐ ☒	DS Color: ____ ____ ____ Color, Pleo: ____ ____ ____	____ Other	____ Other	0 Vermiculite	____ Carbonate
	Color of Layer: ____ Detected: Yes / No	Biref: ____ ____ ____ Sign: ____ ____ ____	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐ Fiberglass Isotopic ☐ Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐	____ Other	____ Vermiculite ____ NA Residue Fr ____ Asbestos
Comments:						
POINT COUNT RESULTS ON THE BACK	Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☒ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2			Q.C. ☐		NOB PLM: ____

ATC ASSOCIATES INC. – NEW YORK

104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101167-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 2/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

---

1 Field Number 38B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Beige Texture F	Morphology ___ Extinction ___	___ Chrysotile	3 Cellulose	97 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

2 Field Number 38C

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Beige Texture F	Morphology ___ Extinction ___	___ Chrysotile	4 Cellulose	96 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Grevimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

3 Field Number 40A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color D-Gray Texture NF	Morphology ___ Extinction ___	___ Chrysotile	TR Cellulose	28 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	72 Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Asaume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

---

4 Field Number 40B

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color D-Gray Texture NF	Morphology ___ Extinction ___	___ Chrysotile	TR Cellulose	30 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	70 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	0 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK

Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2

Q.C. ☐

NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0, ELAP 10679
Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT
TEMPERATURE °c 25

Client / Project: Atc Vermont / Main St J, Vermont Project Number: _____
Analysis Date: 12/21/12 Analyst: Af Batch Number: 25538

1 Field Number 40C

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color D-Grey Texture NF
Homogenity 4
# of Layers 1 Asbestos ☐ ☑
Color of Layer _____ Detected Yes No
Comments:

PLM Optical Properties
Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %
_____ Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
32 Mineral Filler
68 Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

2 Field Number 42A

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color L-Grey Texture F
Homogenity 4
# of Layers 1 Asbestos ☑ ☐
Color of Layer _____ Detected Yes No
Comments:

PLM Optical Properties
Morphology W Extinction ∥
RI ⊥ 1.547 RI ∥ 1.554
DS Color B/M Color, Pleo M
Biref C Sign +

Asbestos Results PLM %
33 Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
TR Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☑
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
67 Mineral Filler
_____ Organic Binders
0 Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☑ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

3 Field Number 42B

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color _____ Texture _____
Homogenity _____
# of Layers _____ Asbestos ☐ ☐
Color of Layer _____ Detected Yes No
Comments: + stop See # 42A

PLM Optical Properties
Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %
_____ Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
_____ Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☐
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
_____ Mineral Filler
_____ Organic Binders
_____ Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

4 Field Number 42C

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

Stereoscopic Exam
Color _____ Texture _____
Homogenity _____
# of Layers _____ Asbestos ☐ ☐
Color of Layer _____ Detected Yes No
Comments: + stop See # 42A

PLM Optical Properties
Morphology _____ Extinction _____
RI ⊥ _____ RI ∥ _____
DS Color _____ Color, Pleo _____
Biref _____ Sign _____

Asbestos Results PLM %
_____ Chrysotile
_____ Amosite
_____ Other
☐ Assume ACM if ≥10% Vermiculite

Other Fibrous %
_____ Cellulose
_____ Fiberglass
_____ Other
Cellulose Undulose Extinction ☐
Fiberglass Isotopic ☐
Synthetic High Birefringence ☐
Horse Hair: Scales, Low to Moderate Birefringence ☐

Non Fibrous %
_____ Mineral Filler
_____ Organic Binders
_____ Vermiculite
_____ Other

Gravimetric (NOB) Results %
_____ Organic
_____ NA Residue Nfr
_____ Carbonate
_____ Vermiculite
_____ NA Residue Fr
_____ Asbestos

POINT COUNT RESULTS ON THE BACK
Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2
Q.C. ☐
NOB PLM: _____

ATC ASSOCIATES INC. – NEW YORK
104 East 25th Street, 10th Floor, New York, NY 10010
Phone: (212) 353-8280, Fax: (212) 353-3599 or 8306

BULK ASBESTOS ANALYSIS SHEET

Accreditations: NVLAP 101187-0 ELAP 10879

Microscopes: OLYMPUS BH-2 / NIKON OPTIPHOT

Client / Project: Ate Vermont / Main St J, Vermont Project Number: _____

Analysis Date: 12/21/12 Analyst: AF Batch Number: 25538

TEMPERATURE °c: 25

1 Field Number 44A

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color Black Texture NF	Morphology ___ Extinction ___	___ Chrysotile	2 Cellulose	10 Mineral Filler	___ Organic
Homogenity 4	RI ⊥ ___ RI ∥ ___	___ Amosite	5 Fiberglass	83 Organic Binders	___ NA Residue Nfr
# of Layers 1 Asbestos ☐ ☑	DS Color ___ Color, Pleo ___	___ Other	___ Other	2 Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☑	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☑ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☑ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☑ AF — NOB PLM: _____

2 Field Number

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ Extinction ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ Color, Pleo ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

3 Field Number

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ Extinction ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ Color, Pleo ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

4 Field Number

Stereoscopic Exam	PLM Optical Properties	Asbestos Results PLM %	Other Fibrous %	Non Fibrous %	Gravimetric (NOB) Results %
Color ___ Texture ___	Morphology ___ Extinction ___	___ Chrysotile	___ Cellulose	___ Mineral Filler	___ Organic
Homogenity ___	RI ⊥ ___ RI ∥ ___	___ Amosite	___ Fiberglass	___ Organic Binders	___ NA Residue Nfr
# of Layers ___ Asbestos ☐ ☐	DS Color ___ Color, Pleo ___	___ Other	___ Other	___ Vermiculite	___ Carbonate
Color of Layer ___ Detected Yes No	Biref ___ Sign ___	☐ Assume ACM if ≥10% Vermiculite	Cellulose Undulose Extinction ☐	___ Other	___ Vermiculite
Comments:			Fiberglass Isotopic ☐		___ NA Residue Fr
			Synthetic High Birefringence ☐ Horse Hair: Scales, Low to Moderate Birefringence ☐		___ Asbestos

Gravimetric (NOB) Required ☐ Recommended ☐ Gravimetric PREP ☐ Gravimetric (NOB) PLM ☐ Gravimetric (NOB) TEM ☐

POINT COUNT RESULTS ON THE BACK — Method: ☐ ELAP + EPA ☐ ELAP ☐ EPA ☐ SCANNING OPTION: ELAP (P.C.) & EPA See Note # 1 or Note # 2 — Q.C. ☐ — NOB PLM: _____

ATC ASSOCIATES INC.

INTRALABORATORY AND INTERLABORATORY QC SHEET

ASBESTOS LABORATORY QUALITY CONTROL PROGRAM
DATA ENTRY SHEET FOR BULK SAMPLES
10% Recounts

	DATE	ANALYST INITIALS	SAMPLE #	BATCH #	QC #	% ASB	P/F	INTERLABORATORY/ CORRECTIVE ACTIONS
O:	12/21/12	AF	1B	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF 2	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 2	ND		
O:	12/21/12	AF	4C	25538	[redacted]	Tr Chr		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF3	Tr Chr	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 3	Tr Chr		
O:	12/21/12	AF	8A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF4	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 4	ND		
O:	12/21/12	AF	19A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF5	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 5	ND		
O:	12/21/12	AF	24A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF6	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 6	ND		
O:	12/21/12	AF	30A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF7	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF7	ND		
O:	12/21/12	AF	35C	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF8	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 8	ND		
O:	12/21/12	AF	44A	25538	[redacted]	ND		
B:	12/22/12	AF	[redacted]	[redacted]	12-21-AF9	ND	P	
D:	12/22/12	MF	[redacted]	[redacted]	12-21-AF 9	ND		

NOTE:

Intra-Analyst QC: R= |(O-B) / ((O+B)/2)|

IF R > 1.0 REJECT

O=Original Count

Inter-Analyst QC: R= (O-D) / ((O+D)/2)

IF R > 1.0 or < -1.0 REJECT

B=Blind Count by same analyst (Duplicate)

D= Duplicate by second analyst (Replicate)

Cardno ATC

Page 1 of 6

BATCH NO. 25538

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST. JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/19/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☒ email results to: Harland.Miller@Cardno.com

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H1	01A	DOOR CAULKING			NORTH DOOR BASEMENT LEVEL		
	01B	GRAY -			SAME AS 01A		
	01C	(EXTERIOR)			SAME AS 01A		
H2	02A	WINDOW			NORTH SIDE CENTER WINDOW BASEMENT		
	02B	CAULKING - WHITE			NORTHSIDE WEST END 1ST FLOOR		
	02C	(EXTERIOR)			NORTH WEST CORNER WINDOW		
H3	03A	WINDOW			NORTH SIDE @ STAIRS BASEMENT LEVEL		
	03B	GLAZING			NORTH SIDE BASEMENT BY STAIRS		
	03C	(EXTERIOR)			SOUTHSIDE, EAST CORNER		
H4	04A	WINDOW			NORTH SIDE CENTER OF FRONT BLDG		
	04B	CAULKING			WINDOW BY STAIRS NORTH SIDE		
	04C	WHITE (EXTERIOR)			FRONT OF BLDG EAST NE CORNER		
H5	05A	TAR COATING			@ North Door (Gym)		
	05B	ON BRICK			↓		
	05C	(EXTERIOR)			↓		
H6	06A	SILVER COATED			@ South Garage		
	06B	FLASHING			↓		
	06C	(EXT. ROOF)			↓		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/18/12	1800	ATC S. HASAN	12/18/12	5:00 P.M
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
24a. Analyzed By:	12/21/12	11:30 P.M
24b. Analyzed By:		
24c. QC By:		

27. Comments (Lab) PLM QC BY 12/21/12

Cardno ATC

BATCH NO. 25538 ✓

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST. JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/9/12	ST J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER / ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H7	07A	Built up Tar Roof			@ Hatch		
	07B	↓			@ South Parapet Drain		
	07C	↓			@ Center of Roof		
H8	08A	Roofing Felt			See 07A		
	08B	↓			See 07B		
	08C	↓			See 07C		
H9	09A	Black Caulk @ gambrel			@ gambrel N		
	09B	↓			@ Gambrel S		
	09C	↓			@ Gambrel Center		
H10	10A	VOID					
	10B	↓					
	10C	↓					

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/9/12	1800	ATC S. HASAN	12/20/12	9:00 PM
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	ATC	25. Date	26. Time
24a. Analyzed By:		12/11/12	11:55PM
24b. Analyzed By:			
24c. QC By:			

27. Comments (Lab) QC BP

Cardno ATC

Page 3 of 6

BATCH NO. 255381

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBBEY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/19/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER / ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H11	11A	PLASTER			NO SAMPLES		
H12	12A	CARPET			ROOM 11 WEST END		
	12B	MASTIC			ROOM 11 @ STAIRS		
	12C	(1ST FLOOR)			ROOM 11 OUTSID RM 15		
H13	13A	GYPSUM WALLBD			NO SAMPLES		
H14	14A	JNT CMPND			NO SAMPLES		
H15	15A	DOOR INSULATION			NO SAMPLES		
H16	16A	FLOOR PAINT			ROOM 23 @ DOOR TO STAIRS		
	16B	GRAY			ROOM 23 SOUTH END		
	16C	(BASEMENT)			ROOM 25 @ ROOM 22		
H17	17A	VOID			NO SAMPLE		
H18	18A	CEILING PANELS			NO SAMPLE		
H19	19A	WALL PAINT			SAME AS 20C		
	19B	WHITE			SAME AS 20B		
	19C	(ON BRICK)			SAME AS 20A		
H20	20A	FLOOR PAINT			ROOM 26 @ DOOR		
	20B	BLUE			ROOM 26 CENTER		
	20C	(BASEMENT)			ROOM 26 WEST END		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/19/12	1800	ATC S. HASAN	12/20/12	5:00 P.M
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
24a. Analyzed By:	12/21/12	11:59 AM
24b. Analyzed By:		
24c. QC By:		

27. Comments (Lab) OCB

Cardno ATG

Page 4 of 6

BATCH NO. 25538

171 Commerce Street | PO Box 1485 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LUBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/9/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H21	21A	12x12 FLOOR			ROOM 18 CENTER		
	21B	TILE -			ROOM 18 @ ROOM 19		
	21C	BEIGE			ROOM 18 WESTSIDE CENTER		
H22	22A	MASTIC W/			SAME AS 21A		
	22B	H21			SAME AS 21B		
	22C	↓			SAME AS 21C		
H23	23A	CARPET MASTIC			NO SAMPLE		
H24	24A	6"OD AIR			ROOM 27 SAFE AREA		
	24B	CEL PIPE			ROOM 25 @ DOOR TO ROOM 18		
	24C	INSULATION			ROOM 29 CENTER		
H25	25A	2x4 PRESSED BOARD			NO SAMPLE		
H26	26A	BRICK - FIRE			NO SAMPLE		
H27	27A	VOID			NO SAMPLE		
H28	28A	COATING ON			SOUTHSIDE GYM @ SW CENTER WINDOW		
	28B	BRICK AS			SOUTHSIDE GYM @ SW WINDOW		
	28C	WINDOW SILL			SOUTHSIDE GYM @ SW CENTER CORNER		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/9/12	1200	ATC S. HASAN	12/20/12	S.HASAN
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
24a. Analyzed By:	12/21/12	11:57 PM
24b. Analyzed By:		

27. Comments (Lab) DC BY

Cardno ATC

Page 5 of 6

BATCH NO. 25538

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/19/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H29	29A	RSF - BLUE			ROOM 12 EAST WALL		
	29B	MAROON			ROOM 12 EAST WALL		
	29C	↓			ROOM 12 EAST WALL		
H30	30A	MASTIC ASSOC			SAME AS 29A		
	30B	W/ H29			SAME AS 29B		
	30C	↓			SAME AS 29C		
H31	31A	STAIR RISERS			FIRST FLOOR @ BOTTOM OF STAIR		
	31B	BLACK			FIRST FLOOR @ TOP OF STAIRS		
	31C	↓			BASEMENT STAIRS		
H32	32A	VOID			NO SAMPLE		
H33	33A	GLUE DABS			ROOM 25 @ DOOR SAPE		
	33B	LT. BROWN			SAME AS 33A		
	33C	↓			SAME AS 33A		
H34	34A	VIBRATION CLOTH			NO SAMPLE		
H35	35A	BLOWN IN			ROOM 18 CENTER		
	35B	INSULATION			ROOM 18 CENTER		
	35C	↓			ROOM 29 EAST SIDE		

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I ~~~	12/19/12	1800	ATC S. HASAN	12/20/12	9:00 P.M
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
ATC		
24a. Analyzed By:	12/21/12	11:55 PM
24b. Analyzed By:		

27. Comments (Lab) QC BY

Cardno ATC

BATCH NO. 25538

171 Commerce Street | PO Box 1486 | Williston, Vermont 05495 | 802-862-1980 tel

PLM BULK SAMPLE DATA AND CHAIN OF CUSTODY FORM

PROJECT INFORMATION ☑ Vermont ☐ NY State Code Rule for Asbestos

1. Client	2. Project Name: / 2a. Project Address:	3. Project #:	4. Project Manager: / 4a. Investigator
NVDA	ST JOHNSBURY ARMORY / MAIN ST, ST J, VERMONT	63.35078.0013	A. LIBERTY / AL, HM & DP

5. Date:	6. Building Name: / 7. Sampling Areas:	8. Turnaround Time	
12/9/12	ST. J ARMORY / THROUGHOUT	☐ 3 HRS ☐ 24 HRS ☑ 72 HRS ☐ OTHER ☐ 6 HRS ☐ 48 HRS ☐ STANDARD	☑ Analyze until 1st positive result in each H group. ☐ * Hold until further instructions.

BULK SAMPLE LOCATION ☑ Please fax results to 802-862-1405 ☐ email results to: _____

10. Homogenous Area No.	11. Bulk Sample ID No.	12. Material	13. Thermal System	14. Sample Location: Floor	14. Sample Location: Sample Coordinates	15. Material Total Qty. (LF, SF, PCS)	16. Asbestos Content (Type & %)
H36	36A	BOILER INSULATION			NO SAMPLE		
H37	37A	INSULATION-BOILER DOOR			NO SAMPLE		
H38	38A	DEBRIS			TOP OF BOILER RM 20		
	38B	↓			TOP OF HOT WATER TANK RM 20		
	38C	↓			TOP OF EXHAUST RM 20		
H39	39A	MASTIC ON BASEMENT FLOOR			NO SAMPLE		
H40	40A	PUTTY ON			EAST WALL CENTER RM 21		
	40B	PIPE			SAME AS 40A		
	40C	↓			SAME AS 40A		
H41	41A	SHEET FLOORING BROWN			NO SAMPLE		
H42	42A	MUD 6TH FL			SAME AS 24A		
	42B	ASSOC W/			SAME AS 24B		
	42C	H24			SAME AS 24C		
H43	43A	BOILER INTERNALS			NO SAMPLE		
H44	44A	BOILER GASKET			@ FRONT OF BOILER		
H45							

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By:	21. Date	22. Time
I	12/9/12	1600	ATC S. HASAN	12/20/12	5:00 PM
II					
III					

23. Method of Submittal	
FIELD	
WALK IN	
US MAIL	
FED-X	
OTHER	

LAB INFORMATION

24. Name and Signature	25. Date	26. Time
ATC		
24a. Analyzed By:	12/21/12	11:59 PM
24b. Analyzed By:		

27. Comments (Lab) QC'd

Appendix B

PCB Sample Location Diagram
List of Suspect PCB-Containing Materials
PCB Laboratory Report

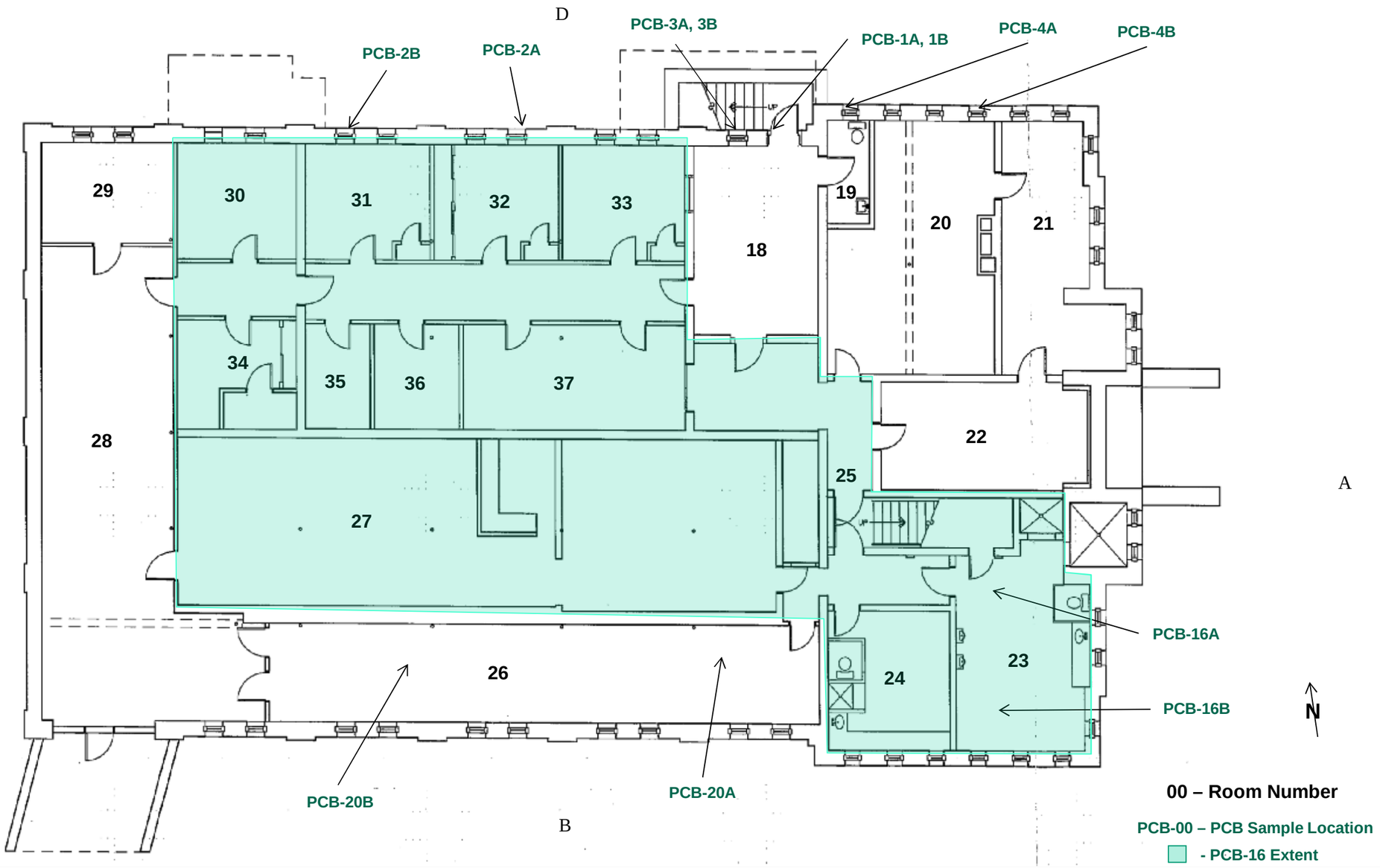
PCB Sample Location Diagram

D

C

A

B



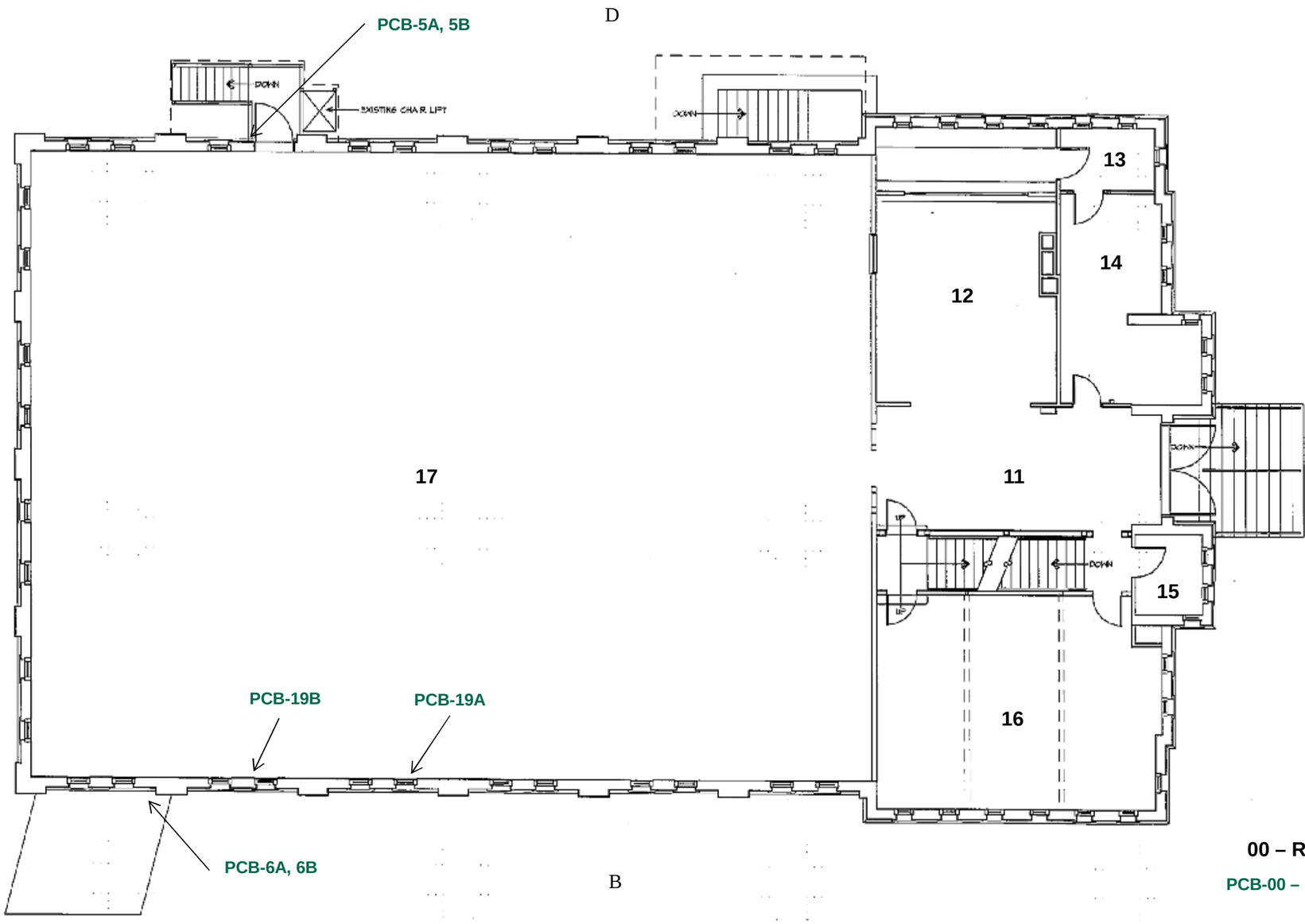
SAMPLE LOCATION DIAGRAM – PCB's

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM – PCB's

Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

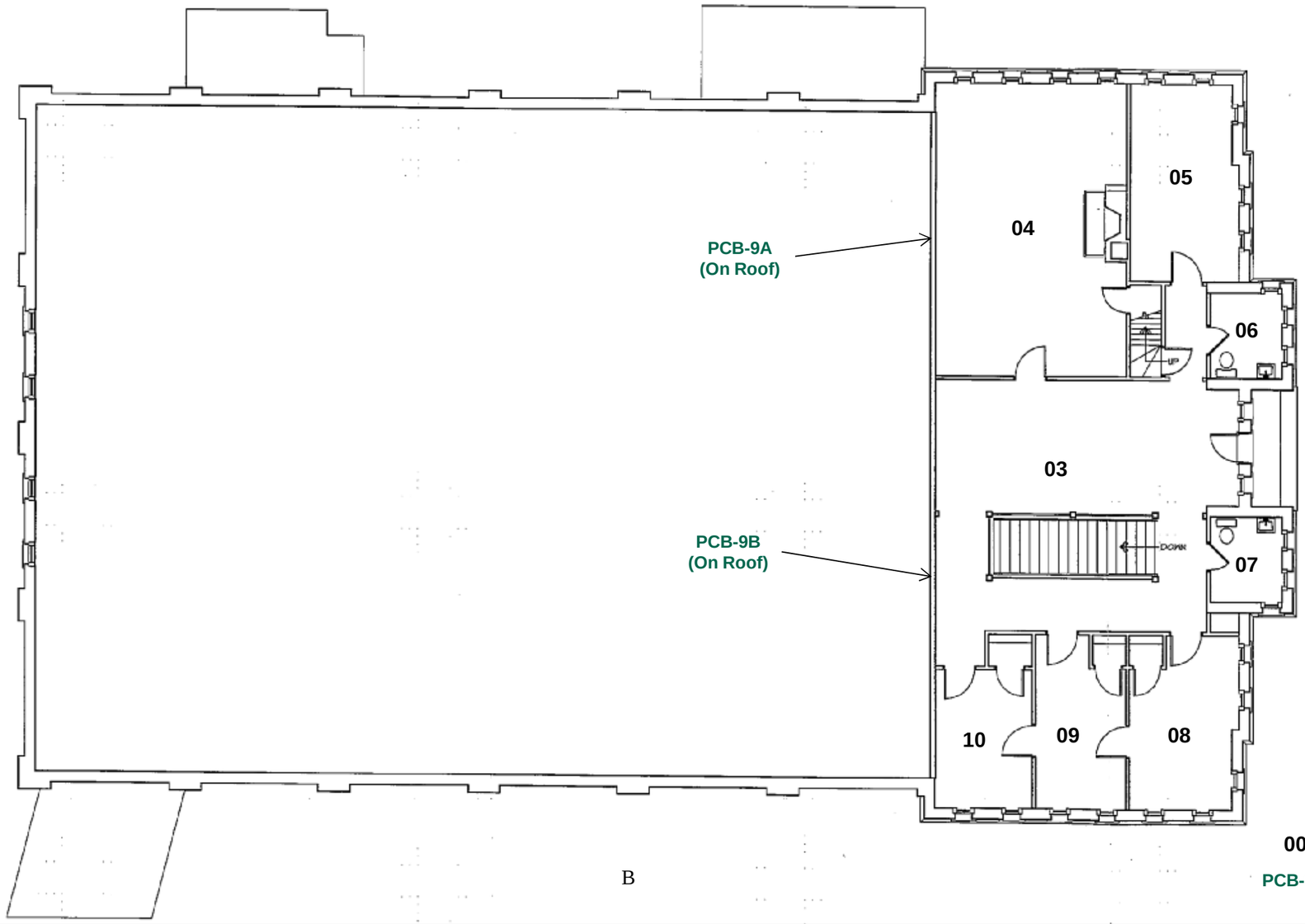
SOURCE : Field Notes

SCALE: Not to scale

D

C

A



B

00 – Room Number

PCB-00 – PCB Sample Location

SAMPLE LOCATION DIAGRAM – PCB's

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future

171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

List of Suspect PCB-Containing Materials

List of Suspect PCB Containing Materials
Former St. Johnsbury Armory – Caulk & Paint Materials
Cardno ATC Project # 63.35078.0013
December 17, 2012

Material Description	Results (ppm)	Sample Number
Exterior Door Caulking - Gray	12-14 ppm	PCB-1A-1B
Exterior Window Caulking - White	1.5 ppm	PCB-2A-2B
Window Glazing - White	ND	PCB-3A-3B
Exterior Window Caulking - White	3.5-26 ppm	PCB-4A-4B
Tar Caulking	ND	PCB-5A-5B
Roof Flashing - Silver	ND	PCB-6A-6B
Roof Caulking - Black	ND	PCB-9A-9B
Floor Paint - Gray	**4700-5700 ppm**	**PCB-16A-16C**
Wall Paint - White	7.4 ppm	PCB-19A-19B
Floor Paint - Blue	27-44 ppm	PCB-20A-20B

ND – None Detected

PCB Laboratory Report

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405

12/31/2012

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/27/2012. The results are tabulated on the attached data pages for the following client designated project:

63.35078.0013

The reference number for these samples is EMSL Order #011205781. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director

The test results contained within this report meet the requirements of NELAC and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10896, PA 68-00367

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 1A — ***Collected:*** 12/17/2012 10:05:00 AM — ***Lab ID:*** *0001*
H1 - Door Caulking Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	12	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.93	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 1B — ***Collected:*** 12/17/2012 10:06:00 AM — ***Lab ID:*** *0002*
H1 - Door Caulking Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	14	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 2A — ***Collected:*** 12/17/2012 10:15:00 AM — ***Lab ID:*** *0003*
H2 - Window Caulk White

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	1.5	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.84	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 2B
H2 - Window Caulk White
Collected: 12/17/2012 10:20:00 AM ***Lab ID:*** *0004*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 3A
H3 - Window Glaze
Collected: 12/17/2012 10:22:00 AM ***Lab ID:*** *0005*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 3B
H3 - Window Glaze
Collected: 12/17/2012 10:26:00 AM ***Lab ID:*** *0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.64	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 4A — ***Collected:*** 12/17/2012 10:31:00 AM — ***Lab ID:*** *0007*
H4 - Window Caulk

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	26	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.85	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 4B — ***Collected:*** 12/17/2012 10:35:00 AM — ***Lab ID:*** *0008*
H4 - Window Caulk

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	3.5	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 5A — ***Collected:*** 12/17/2012 10:40:00 AM — ***Lab ID:*** *0009*
H5 - Tar Caulking

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.82	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 5B
H5 - Tar Caulking
Collected: 12/17/2012 10:42:00 AM ***Lab ID:*** *0010*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.71	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 6A
H6 - Silver Flashing
Collected: 12/17/2012 11:01:00 AM ***Lab ID:*** *0011*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.49	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 6B
H6 - Silver Flashing
Collected: 12/17/2012 11:02:00 AM ***Lab ID:*** *0012*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.61	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Project: **63.35078.0013**

Analytical Results

Client Sample Description 16B — ***Collected:*** 12/17/2012 11:40:00 AM — ***Lab ID:*** *0016*
H16 - Floor Paint Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	4600	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	540	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 16C — ***Collected:*** 12/17/2012 11:49:00 AM — ***Lab ID:*** *0017*
H16 - Floor Paint Grey

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	5700	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	500	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 19A — ***Collected:*** 12/17/2012 11:55:00 AM — ***Lab ID:*** *0018*
H19 - White Wall Paint

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	7.4	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.89	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205781
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/27/12 10:00 AM
Collected: 12/17/2012

Analytical Results

Client Sample Description 19B — ***Collected:*** 12/17/2012 ***Lab ID:*** *0019*
H19 - White Wall Paint — 11:55:00 AM

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	7.4	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.50	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 20A — ***Collected:*** 12/17/2012 ***Lab ID:*** *0020*
H20 - Blue Floor Paint — 12:05:00 PM

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	27	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1260	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1262	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1268	ND	0.79	mg/Kg	12/27/2012	RS	12/28/2012	EH

Client Sample Description 20B — ***Collected:*** 12/17/2012 ***Lab ID:*** *0021*
H20 - Blue Floor Paint — 12:06:00 PM

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1221	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1232	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1242	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1248	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH
3540C/8082A	Aroclor-1254	44	5.5	mg/Kg	12/27/2012	RS	12/31/2012	EH
3540C/8082A	Aroclor-1260	ND	5.5	mg/Kg	12/27/2012	RS	12/31/2012	EH
3540C/8082A	Aroclor-1262	ND	5.5	mg/Kg	12/27/2012	RS	12/31/2012	EH
3540C/8082A	Aroclor-1268	ND	0.88	mg/Kg	12/27/2012	RS	12/28/2012	EH

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order:	011205781
CustomerID:	ATCE53
CustomerPO:	
ProjectID:	

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

01205781

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: S. Goff	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone:	E-Mail:		Page: 1 of 2
Company: Cardno ATC				Job #:
Address: 171 Commerce St.	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495				
Phone: 802 862 1980	PO #:			
Email: Harland.Miller@Cardno.com	WO #:			
Project Name: St. J Armory	Project #: 63. 35078.0013			
Site: St. Johnsbury VT	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

	Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SW846 - 8082 WITH (3540 PREP)	Total Number of containers	Sample #'s / Special Instructions/Note:
			Preservation Code:							
1	H1 - Door Caulking Grey	12/17	~~1005~~	G	S			X		1A
2	" "		1006							1B
3	H2 - Window Caulk White		~~1015~~							2A
4	" "		1020							2B
5	H3 - Window Glaze		1022							3A
6	" "		1026							3B
7	H4 - Window Caulk		1031							4A
8	" "		1035							4B
9	H5 - Tar Caulking		1040							5A
10	" "		1042							5B
11	H6 - Silver Flashing		1101							6A

per Steve - 21 separate samples, Do Not Composite
12/27 11:10AM - TA

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time: 12/19/12	Company: Cardno	Received by:	Date/Time: 12/19/12 1530	Company: TAB
Relinquished by:	Date/Time: 12/26/12 1055	Company: TABUR	Received by:	Date/Time: 12/26/12 1116	Company: Cardno
Relinquished by:	Date/Time:	Company	Received by: Travis Calbert	Date/Time: 12/27/12 10:00AM	Company: EMSL

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

0112057 81

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: S. Goff	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone:	E-Mail:		Page: 2 of 2
Company: Cardno ATC				Job #:
Address: 171 Commerce St.	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495				
Phone: 802 862 1980	PO #:			
Email: Harland.Miller@Cardno.com	WO #:			
Project Name: St. J Armory	Project #: 63. 35078.0013			
Site: St. Johnsbury VT	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

	Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SW 846 8082 with 3540 prep	Total Number of containers	Special Instructions/Note:
				Preservation Code:						Sample #'s
12	H6 - Silver Flashing	12/17	1102	G	S			X		6B
13	H9 - Black Roof Caulk		1140							9A
14	H9 " "		1140							9B
15	H16 - Floor Paint Grey		1145							16A
16	" "		1149							16B
17	" "		1149							16C
18	H19 - White Wall Paint		1155							19A
19	" "		1155							19B
20	H20 - Blue Floor Paint		1205							20A
21	" "		1206							20B

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

	Date/Time	Company		Date/Time	Company
Relinquished by:	12/26/12 1055	TA BUR	Received by:	12-26-12 1110	Cardno
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Travis Albert	12/27/12 10:00AM	EMSL

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Appendix C

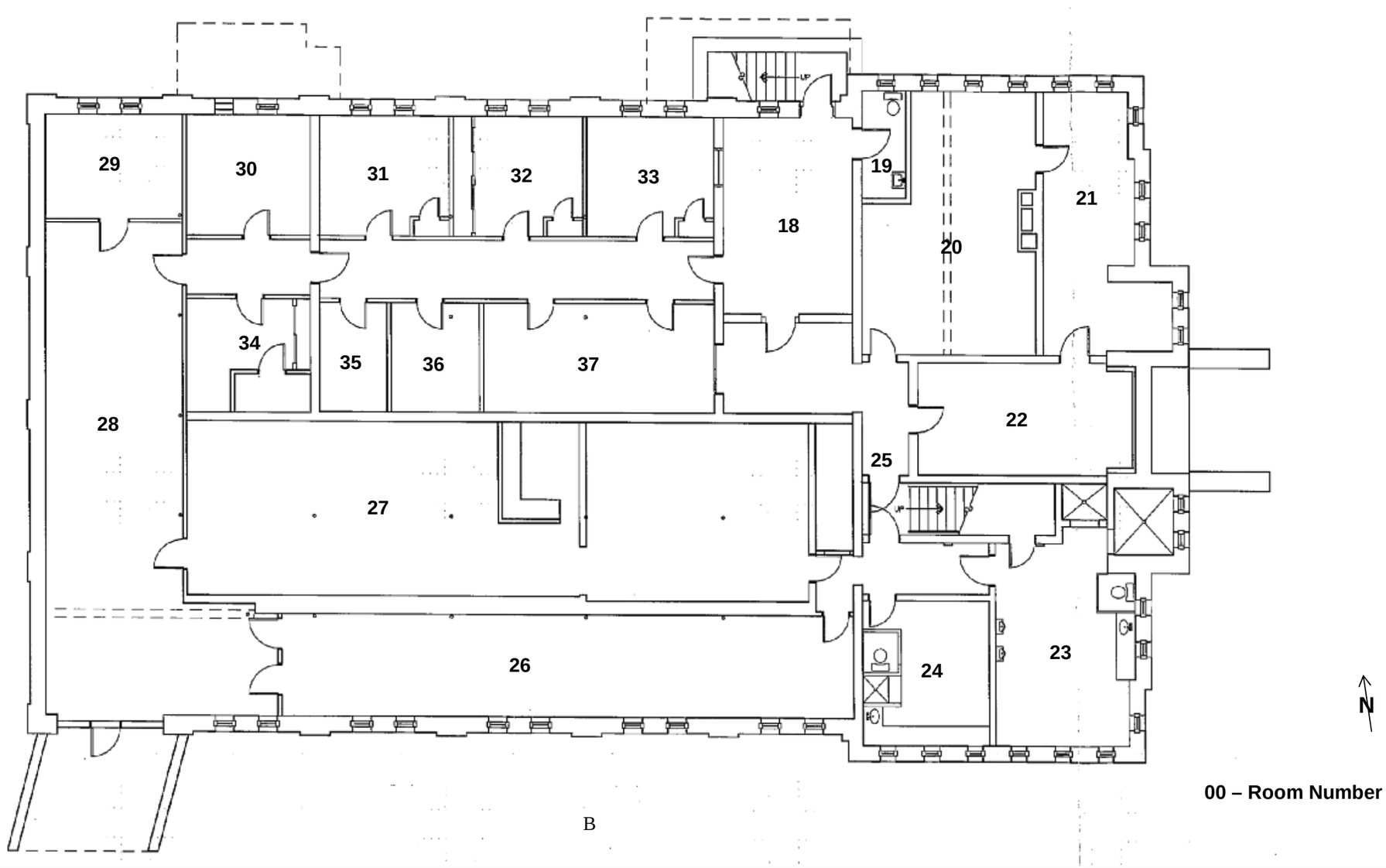
Building Diagram with Room Numbers
XRF Field Sheets
XRF Protocol
Performance Characteristic Sheet
XRF QA/QC Results

Building Diagram with Room Numbers

D

C

A



B

00 – Room Number

SAMPLE LOCATION DIAGRAM

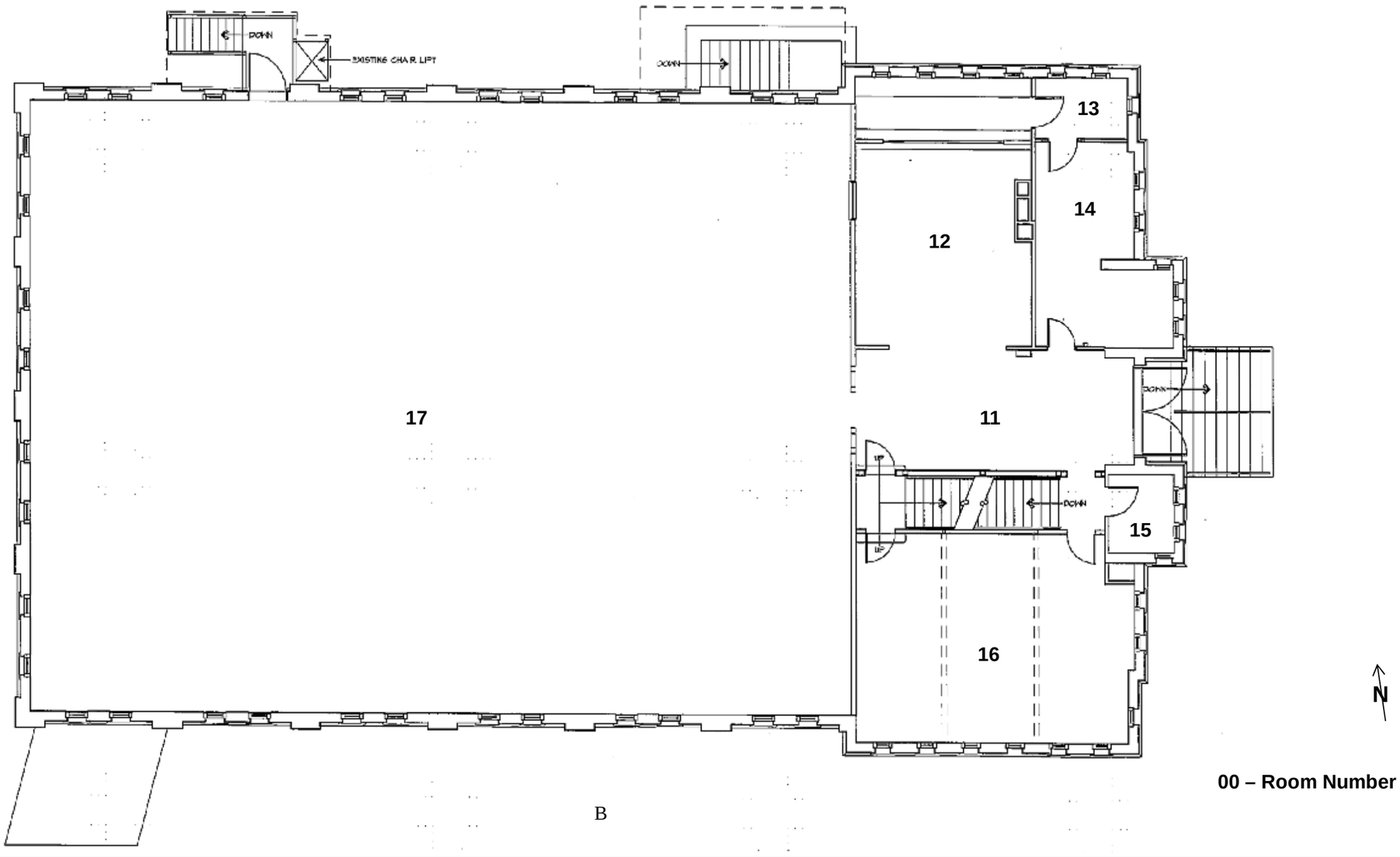
Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

D



C

A

B

SAMPLE LOCATION DIAGRAM

Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

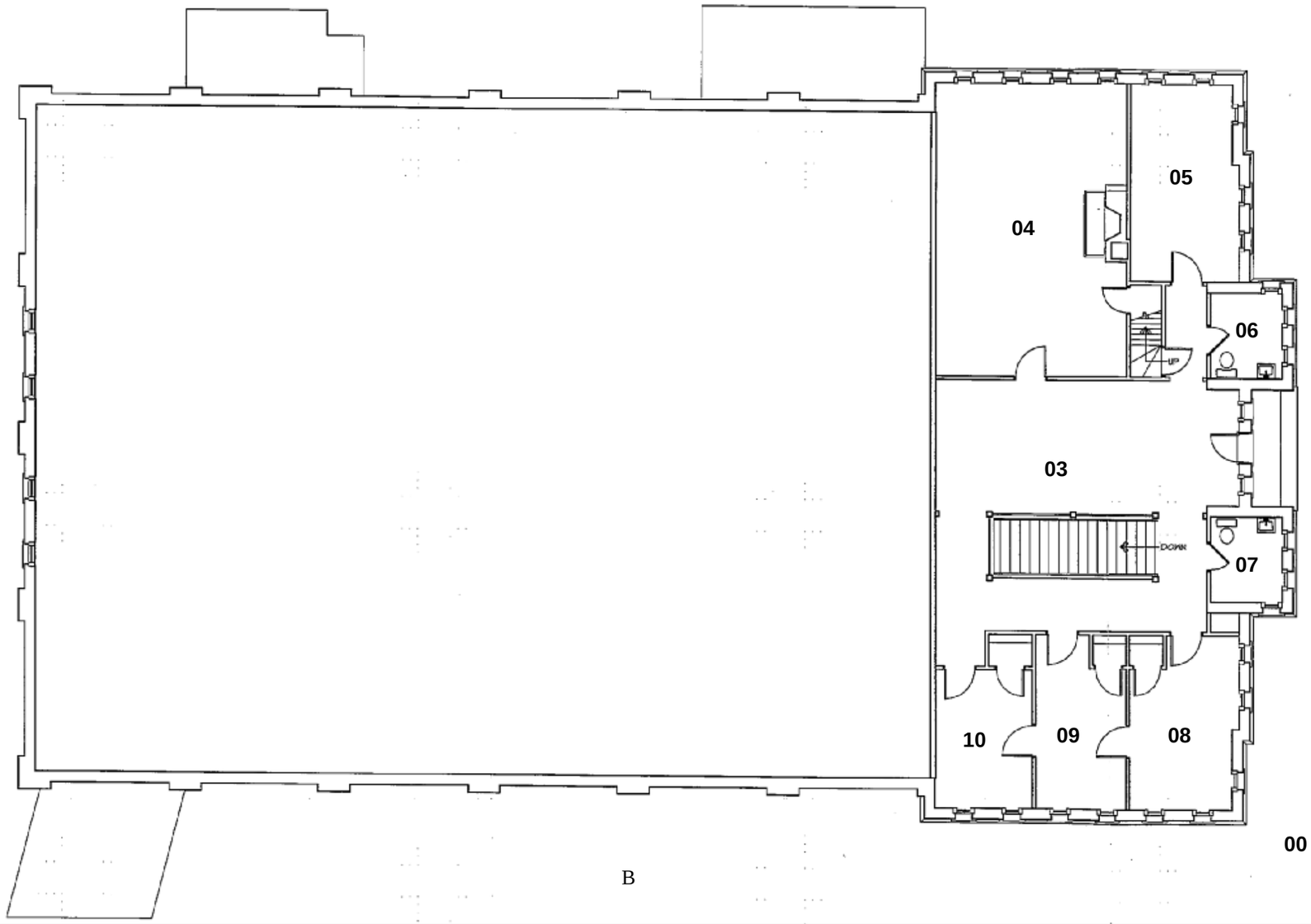
SOURCE : Field Notes

SCALE: Not to scale

D

C

A



B

00 – Room Number

SAMPLE LOCATION DIAGRAM

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

XRF Field Sheets

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 3 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.0					
Crown Molding										
Wall	F	P	W	A	0.3					
Wall	↓	↓	↓	B	0.7					
Wall	↓	↓	↓	C	0.7					
Wall	↓	↓	↓	D	0.6					
Baseboard / Assoc. Trim	F	W	BR	A	0.2		A4			
Floor	F	W	S		0.1					
Radiator/Rad Cover	F	M	Silver		0.0					
Shelves										
DOOR TYPE 1										
Door	F	W	BR	A2	0.1		A11			
Casing	↓	↓	↓	↓	0.2		↓			
Jamb	↓	↓	↓	↓	0.1		↓			
Stop	↓	↓	↓	↓	0.3		↓			
Threshold										
DOOR TYPE 2										
Door	F	W	BR	B1	0.0					
Casing	↓	↓	↓	↓						
Jamb	↓	↓	↓	↓						
Stop	↓	↓	↓	↓						
Threshold										
WINDOW TYPE 1										
Casing/Apron	F	W	BR	A1	0.0		A11			
Stop	G	W	BR		0.1					
Jamb	P	W	—		0.2					
Window Well	F	W	W		>9.9					LBP
Sill	F	W	BR		0.3					
Sash/Mullion	F	W	BR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Railing	G	W	BR		0.1					

CALIBRATIONS TIME: 1000 12/10/12

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	0.0	2nd Reading:	0.1	3rd Reading:	0.0

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE	St. Johnsbury Armory
PROJECT ADDRESS	St. Johnsbury, Vermont
INSPECTOR	Harland Miller
DATE	December 10 2012
ROOM #: 4	Use:

LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	D	W		0.0					
Crown Molding	G	W	W	A	0.1		A 11			
Wall	G	P	Gr/BL	A	0.2	0.7				
Wall	↓	↓	↓	B	-0.3					
Wall				C	0.0					
Wall				D	0.2					
Baseboard / Assoc. Trim	G	W	BR		0.1					
Floor	G	W	S		-0.1					
Radiator/Rad Cover	G	M	Silver	D	0.0					
Shelves										
DOOR TYPE 1										
Door	G	W	BR	A	0.1		A11			
Casing	↓	↓	↓	↓	0.2					
Jamb					-0.1					
Stop					0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G P	W	BR	D1	0.1		A 11			
Stop	G	W	BR	↓	0.0		↓			
Jamb	~~G~~ P	W	BR		0.2					
Window Well	P	W	W		>9.9					LBP
Sill	F	W	BR		0.2					
Sash/Mullion	F	W	BR	↓	0.1		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Fire door	G	W	BR		0.0					
closet wall	G	P	W	A	0.2					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION	SUBSTRATE					
G = GOOD (NO VISABLE DAMAGE)	P = PLASTER	B = BRICK	WP = WALLPAPER		PP = PURPLE
F = FAIR (LESS THAN 10% DAMAGE)	SR = SHEETROCK	C = CONRETE	V = VARNISH	C = CREAM	Y = YELLOW
P = POOR (GREATER THAN 10% DAMAGE	W = WOOD	O = OTHER	S = STAIN	T = TAN	R = RED
	M = METAL		BL = BLUE	GY = GREY	P = PINK
	CPT = CARPETED		BLK = BLACK	GR = GREEN	BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 5 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	D	W		0.1					
Crown Molding										
Wall	G	W	S	A	0.7					
Wall	↓	↓	↓	B	0.0					
Wall	↓	↓	↓	C	0.1					
Wall	↓	↓	↓	D	0.1					
Baseboard / Assoc. Trim	G	W	W		0.0					
Floor	G	CPT	BR		0.2					
Radiator/Rad Cover	G	M	Silver		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	W	B	0.3					
Casing	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.0					
Stop	↓	↓	↓ BR	↓	0.2					
Threshold										
DOOR TYPE 2										
Door	G	W	W	B	0.0					
Casing	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.2					
Stop	G	W	W DR	↓	0.1					
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W	A1	0.1		A H			
Stop	G	W	W	↓	0.2					
Jamb	F	W	W	↓	0.1					
Window Well	P	W	W	↓	0.3					
Sill	G	W	W	↓	0.1					
Sash/Mullion	G	W	W	↓	0.3					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

9 of type 1

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP = WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 2012

ROOM #: 6 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.0					
Crown Molding										
Wall	G	P	BR	A	0.2					
Wall	↓	↓	↓	B	-0.1					
Wall				C	0.1					
Wall				D	0.0					
Baseboard / Assoc. Trim	G	P/W	BR	A	-0.3					
Floor	G	W	G		0.1					
Radiator/Rad Cover	F	M	Silver	A	0.0					
Shelves										
DOOR TYPE 1										
Door	G F	W	BR	C	0.2					
Casing	G	↓	↓	↓	0.1					
Jamb	G				0.0					
Stop	G				0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G P	W	BR	D1	0.2		AH			
Stop	G	W	BR		0.1		↓			
Jamb	F	W	BR	↓	-0.3					
Window Well	P	W	W		0.1					
Sill	F	W	BR		0.0					
Sash/Mullion	F	W	BR	↓	0.3					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 7 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	SR	W		0.0					
Crown Molding	G	W	W	D	-0.2		All			
Wall	G	P	BR	A	0.0					
Wall	G	P	BR	B	0.1					
Wall	↓	↓	↓	C	-0.0					
Wall	↓	↓	↓	D	0.2					
Baseboard / Assoc. Trim	G	W	BR		0.1					
Floor	G	W	S		0.0					
Radiator/Rad Cover	G	M	Silver		0.7					
Shelves										
DOOR TYPE 1										
Door	G	W	BR	C	-0.3					
Casing	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.3					
Stop	↓	↓	↓	↓	0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	P	W	BR	A1	-0.1		All			
Stop	G	W	BR	↓	0.0		↓			
Jamb	F	W	BR	↓	0.2		↓			
Window Well	P	W	W	↓	39.9		↓			LBP
Sill	F	W	BR	↓	0.1		↓			
Sash/Mullion	F	W	BR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 8 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.2					
Crown Molding	G	W	W	A	0.1		A-4			
Wall	G	P	Y	A	-0.2					
Wall	↓	↓	↓	B	0.1					
Wall				C	0.0					
Wall				D	0.2					
Baseboard / Assoc. Trim	G	W	R	A	-0.1		A-1			
Floor	G	W	S		0.1					
Radiator/Rad Cover	G	M	Silver		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	R	D	-0.0		A-1			
Casing	↓	↓	↓	↓	0.2		↓			
Jamb					0.1					
Stop					0.2					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	R	A-1	-0.1		A-1			
Stop	G	W	R	↓	0.1		↓			
Jamb	F	W	R		0.3					
Window Well	P	W	W		>9.9					LBP
Sill	G	W	R		0.1					
Sash/Mullion	G	W	R	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 9 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.3					
Crown Molding	G	W	W	D	-0.2		A-11			
Wall	G	P	W	A	0.1					
Wall	↓	↓	↓	B	0.2					
Wall				C	-0.1					
Wall				D	0.0					
Baseboard / Assoc. Trim	G	W	BLU	C	0.1		A-11			
Floor	G	W	S		0.2					
Radiator/Rad Cover	G	M	[illegible]		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	BLU	D1	-0.3		D2			
Casing	↓	↓	↓	↓	0.4		↓			
Jamb					0.2					
Stop			BR		0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	F P	W	BLU	B1	-0.3		A11			
Stop	G	W	BLU	↓	0.1		↓			
Jamb	F	W	BLU		0.0					
Window Well	P	W	W		79.9					LBP
Sill	F	W	W		0.0					
Sash/Mullion	F	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 16 2012

ROOM #: 16 Use: LEVEL: 2

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	F	PW	W		0.0					
Crown Molding	G	W	W		0.2					
Wall	P	P	W	A	2.1					
Wall	↓	↓	↓	B	0.0					
Wall				C	0.0					
Wall				D	0.3					
Baseboard / Assoc. Trim	F	W	W	C	0.3		All			
Floor	G	W	S		0.1					
Radiator/Rad Cover	F	M	silver		0.2					
Shelves										
DOOR TYPE 1										
Door	F P	W	W	B1	0.1		All			
Casing	↓	↓	↓	↓	0.3		↓			
Jamb					0.1					
Stop	F	W	BR		0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	P	W	W	B1	0.0		All			
Stop	F	W	W	↓	0.2					
Jamb	F	W	W		0.1					
Window Well	P	W	W		79.9					LBP
Sill	P	W	W		0.0					
Sash/Mullion	F	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME: 1230

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.1	3rd Reading:	1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	0.0	2nd Reading:	0.0	3rd Reading:	0.1

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 19, 2012

ROOM #: 11 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	SR	W		0.3					
Crown Molding										
Wall	G	SR	W	A	0.1					
Wall	↓	↓	↓	B	0.2					
Wall	↓	↓	↓	C	0.1					
Wall	↓	↓	↓	D	0.0					
Baseboard / Assoc. Trim	G	W	GR	A	-0.0		A-11			
Floor	P	W	S		0.2					
Radiator/Rad Cover	G	M	GY	B	0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	S	DL	0.0					
Casing	G	W	GR	↓	0.0					
Jamb	G	W	GR	↓	0.0					
Stop	G	W	GR	↓	0.1					
Threshold										
DOOR TYPE 2										
Door	G	W	W	A1	-0.2					
Casing	G	W	GR	↓	0.3					
Jamb	G	W	GR	↓	0.1					
Stop	G	W	GR	↓	0.2					
Threshold										
WINDOW TYPE 1										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory
PROJECT ADDRESS: St. Johnsbury, Vermont
INSPECTOR: Harland Miller
DATE: December 19 2012
ROOM #: 12 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G-F	SR	W		0.3					
Crown Molding										
Wall	G	SR	W	A	-0.2					
Wall	↓	↓	↓	B	0.1					
Wall	↓	↓	↓	C	0.0					
Wall	↓	↓	↓	D	-0.3					
Baseboard / Assoc. Trim	G	W	GR	C	0.1		A11			
Floor	G	CPT	R		0.2					
Radiator/Rad Cover					0.0					
Shelves Bar	G	W	S	D	0.0					
DOOR TYPE 1										
Door	G	W	GY	A	0.2					
Casing	G	W	GR	↓	0.1					
Jamb	G	W	GR	↓	0.3					
Stop	G	W	GR	↓	0.3					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	DR	0.1		A11			
Stop	↓	↓	↓	↓	0.3		↓			
Jamb	↓	↓	↓	↓	-0.2		↓			
Window Well	P	W	W	↓	>9.9		↓			LBP
Sill	G	W	GR	↓	0.0		↓			
Sash/Mullion	G	W	GR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 13 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.3					
Crown Molding	G	W	W	A	0.11		A+1			
Wall upper	G	P	GR	A	0.2					
Wall	↓	↓	↓	B	0.1					
Wall				C	0.2					
Wall	↓	↓	↓	D	0.0					
Baseboard / Assoc. Trim	G	W	GR		0.2					
Floor	G	CPT	BLU		0.1					
Radiator/Rad Cover	G	M	Silver	D	-0.3					
Shelves										
DOOR TYPE 1										
Door	G	W	W	C	0.1					
Casing	G	W	GR	↓	0.0		B			
Jamb	↓	↓	↓	↓	0.2		↓			
Stop					0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	A	-0.2		A+1			
Stop	↓	↓	↓		0.1					
Jamb				↓	0.0		↓			
Window Well	P	W	W		79.9					LBP
Sill	G	W	GR		0.0					
Sash/Mullion	G	W	GR	↓	0.3		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
well lower	G	P	GR	A	0.2					
↓	↓	↓	↓	B	0.1					
				C	0.3					
				D	0.0					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 14 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	SR	W		0.0					
Crown Molding										
Wall	G	SR	W	A	0.2					
Wall	↓	↓	↓	B	0.3					
Wall	↓	↓	↓	C	-0.1					
Wall	↓	↓	↓	D	0.2					
Baseboard / Assoc. Trim	G	W	GR	C	0.1		A-1			
Floor	G	CPT	BLU		0.0					
Radiator/Rad Cover	G	M	Silver	A	0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	S	B	-0.1		B			
Casing	G	W	GR	↓	0.2		D			
Jamb	↓	↓	↓	↓	0.1		↓			
Stop	↓	↓	↓	BL	0.0		↓			
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	AZ	0.2		A-11			
Stop	G	W	GR	↓	0.3		↓			
Jamb	G	W	GR	↓	0.1		↓			
Window Well	F	W	W	↓	79.9		↓			LBP
Sill	G	W	GR	↓	0.4		↓			
Sash/Mullion	G	W	GR	↓	0.2		↓			
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION	SUBSTRATE				
G = GOOD (NO VISABLE DAMAGE)	P = PLASTER	SR = SHEETROCK	B = BRICK	WP = WALLPAPER	PP=PURPLE
F= FAIR (LESS THAN 10% DAMAGE)	W = WOOD	C = CONRETE		V = VARNISH C = CREAM	Y = YELLOW
P = POOR (GREATER THAN 10% DAMAGE	M = METAL	O = OTHER		S = STAIN T = TAN	R = RED
	CPT = CARPETED			BL = BLUE GY = GREY	P = PINK
				BLK = BLACK GR = GREEN	BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 15 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.0					
Crown Molding	F	W	P	D	0.2		A 1			
Wall	F	P	P	A	0.1					
Wall	↓	↓	↓	B	-0.3					
Wall				C	0.1					
Wall				D	1.2					
Baseboard / Assoc. Trim	G	W	P	A	0.1		A 1			
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	GR	C	0.0					
Casing	F	W	P		0.2					
Jamb	F	W	BR	↓	0.3					
Stop	F	W	GR		0.1					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	F	W	P	A1	0.0	0.1	A 1			
Stop	F	W	P		0.2	0.0				
Jamb	F	W	P		0.1	-0.2				
Window Well	P	W	W		-0.3	0.0				
Sill	F	W	P		0.1	0.1				
Sash/Mullion	F	W	P	↓	0.3	0.0				
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F = FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP = WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP = PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 19 2012

ROOM #: 16 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	P	W		0.0					
Crown Molding	G	W	W	A	0.2		All			
Wall	G	RW	W	A	0.1					
Wall	↓	↓	↓	B	~0.3					
Wall	↓	↓	↓	C	0.1					
Wall	↓	↓	↓	D	0.0					
Baseboard / Assoc. Trim	G	W	GR		0.2					
Floor	G	W	S		0.1					
Radiator/Rad Cover	G	M	Silver	A	~0.3		B			
Shelves										
Rad Cover	G	W	GR	B	0.0					
DOOR TYPE 1										
Door	G	W	W	D1	0.0		D2			
Casing	G	W	GR	↓	0.2		↓			
Jamb	G	W	GR	↓	0.1		↓			
Stop	G	W	GR	↓	0.0		↓			
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR		0.2					
Stop	↓	↓	↓		0.1					
Jamb	↓	↓	↓		0.3					
Window Well	P	W	W		79.1					
Sill	G	W	GR		0.0					
Sash/Mullion	G	W	GR		0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Stair Riser	G	W	W	D	0.0					
Tread	G	W	W	D	0.2					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 17 Use: LEVEL: 1

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.1					
Crown Molding										
Wall	G	B	W	A	0.3					
Wall	↓	↓	↓	B	0.2					
Wall				C	0.1					
Wall				D	0.3					
Baseboard / Assoc. Trim										
Floor	G	W	S		0.1					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	S	D	0.0					
Casing	↓	↓	↓	↓	0.1					
Jamb					0.2					
Stop										
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR		0.0					
Stop	G	W	GR		0.2					
Jamb	G	W	GR		0.1					
Window Well	P	W	W		79.9					LBP
Sill	G	W	GR		0.0					
Sash/Mullion	G	W	GR		0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Closet wall	G	W	W		0.0					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 18 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall Upper	P	B	W	A	0.4					
Wall	G	↓	↓	B	0.5					
Wall	G	↓	↓	C	0.7					
Wall	G	↓	↓	D	0.3					
Baseboard / Assoc. Trim										
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	BLK	D	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb	↓	↓	↓	↓	0.1					
Stop	↓	↓	↓	↓	0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GRN	D	0.2					
Stop	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.0					
Window Well	F	W	W	↓	7.9					LBP
Sill	G	W	W	↓	0.0					
Sash/Mullion	G	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall Lower	P	B	W&GR	A	0.1					
	G	B	↓	B	0.3					
	↓	↓	↓	C	0.1					
	↓	↓	↓	D	0.0					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 10 2012

ROOM #: 1920 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall VARIES	G	B	W	A	0.0					
Wall	↓	↓	↓	B	0.2					
Wall				C	0.1					
Wall				D	-0.0					
Baseboard / Assoc. Trim										
Floor	P	C	—		0.0					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	S		0.2					
Casing	↓	↓	↓ W		0.1					
Jamb					0.0					
Stop	↓	↓	↓ W		0.0					
Threshold										
DOOR TYPE 2										
Door	G	M	W		0.2					
Casing	G	W	W	A	0.1					
Jamb	G	W	W		0.2					
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W							
Stop	↓	↓	↓							
Jamb										
Window Well	P	W	W							
Sill	G	W	W							
Sash/Mullion	G	W	W							
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME: 1430

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	0.0	2nd Reading:	0.0	3rd Reading:	0.1

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
D = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 21 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.4					
Crown Molding										
Wall	G	B	BW	A	0.2					
Wall	↓	↓	↓	B	0.0					
Wall				C	3.0					LBP
Wall	↓	↓	↓	D	0.1					
Baseboard / Assoc. Trim										
Floor	P	C	BR		0.2					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	GR	C	~~0.0~~	3.7				LBP
Casing	G	W	S	↓	0.0					
Jamb										
Stop										
Threshold										
DOOR TYPE 2										
Door	G	W	S	B	0.1					
Casing	G	W	BW	↓	0.3					
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	BW	D?	0.0					
Stop	↓	↓	↓	↓	0.2					
Jamb	↓	↓	↓	↓	0.1					
Window Well	P	W	W	↓	79.9					LBP
Sill	G	W	BW	↓	0.2					
Sash/Mullion	G	W	BW	↓	0.0					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall Upper	G	B	P	A	0.2					
	↓	↓	↓	B	0.1					
	↓	↓	↓	C	3.4					LBP
	↓	↓	↓	D	0.0					
Wall Spare	G	B	GR		0.0					

CALIBRATIONS TIME: 12/17/12

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading: 1.0
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading: 1.0
Zero Lead Reference:		1st Reading:	0.2	2nd Reading:	0.2	3rd Reading: -0.0

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 27 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		-0.3					
Crown Molding										
Wall	G	W	W	A	-0.0					
Wall	G	W	W	B	0.3					
Wall	G	W	W	C	0.2					
Wall	G	W	W	D	0.0					
Baseboard / Assoc. Trim										
Floor	F-P	C	GY		1.5					LBP
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	W	W	D	0.0					
Casing	G	M	GY	↓	0.2					
Jamb	↓	↓	↓	↓	0.1					
Stop	↓	↓	↓	↓	0.0					
Threshold										
DOOR TYPE 2										
Door	G	M	W	C	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb	↓	↓	↓	↓	-0.3					
Stop	↓	↓	↓	↓	0.3					
Threshold										
WINDOW TYPE 1										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall lower	G	B	GR	A	0.2					
↓	↓	↓	↓	B	0.1					
				C	0.2					
↓	↓	↓	↓	D	0.1					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 23 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	M	W		1.7					LBP
Crown Molding	G	M	GR	A	1.4					LBP
Wall	G	B	GR	A	1.5					LBP
Wall				B	1.4					LBP
Wall				C	1.5					LBP
Wall				D	1.6					LBP
Baseboard / Assoc. Trim										
Floor	P	C	GR		1.5					LBP
Radiator/Rad Cover	G	M	Silver		0.1					
Shelves										
DOOR TYPE 1										
Door	G	W	GR	D	0.0					
Casing					0.2					
Jamb					0.1					
Stop					0.3					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	AM	0.0					
Stop					0.2					
Jamb					0.1					
Window Well	P	W	W		>9.9					LBP
Sill	G	W	GR		0.2					
Sash/Mullion	G	W	GR		0.1					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 24 Use: LEVEL: B A

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall VPW	G	B	CR	A	2.8					LBP
Wall	↓	↓	↓	B	3.0					LBP
Wall				C	3.0					LBP
Wall										
Baseboard / Assoc. Trim										
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door										
Casing										
Jamb										
Stop										
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	GR	B1	0.0					
Stop	↓	↓	↓	↓	0.1					
Jamb	↓	↓	↓	↓	0.2					
Window Well	P	W	W		>9.9					
Sill	G	W	GR		0.1					
Sash/Mullion	G	W	BR	↓	0.5					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall lower	B	B	W	A	3.0					LBP
	P	B	R	B	3.1					LBP
	P	B	R	C	2.9					LBP

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 2012

ROOM #: 25 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	W		0.1					
Crown Molding										
Wall	G	B	GR	A	0.2					
Wall	↓	↓	↓	B	0.0					
Wall				C	0.7					
Wall				D	0.8					
Baseboard / Assoc. Trim										
Floor	P	C	GY		1.3					LBP
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	W	A	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb					0.1					
Stop					0.0					
Threshold										
DOOR TYPE 2										
Door	G	W	GR	C	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb					0.1					
Stop					0.0					
Threshold										
~~WINDOW TYPE 1~~										
~~Casing/Apron~~ Wall	G	BR	W	A	3.0					LBP
~~Stop~~	↓	↓	↓	B	3.1					LBP
~~Jamb~~				C	3.0					LBP
~~Window Well~~				D	3.2					LBP
~~Sill~~										
~~Sash/Mullion~~										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Stair riser	G	W	W	A	1.1					LBP
tread	P	W	—	↓	0.0					
Stringer	G	W	GR		0.2					
railing	G	W	GR	↓	0.1					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 2012

ROOM #: 26 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall	G	B	W	A	0.5					
Wall	G	B	W	D	0.0					
Wall	G	~~B~~	~~W~~							
Wall	G	C	W	D	0.3					
Baseboard / Assoc. Trim										
Floor	P	C	BR		0.3					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	M	GY	C	0.0					
Casing	↓	↓	↓	↓	0.2					
Jamb					0.1					
Stop	↓	↓	↓	↓	0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W	B2	0.0					
Stop	G	W	W		0.2					
Jamb	G	W	W	↓	0.1					
Window Well	F	W	W		>9.5					LBP
Sill	G	W	W	↓	0.0					
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 27 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	W	S		0.0					
Crown Molding										
Wall	G	C	W	A	0.0					
Wall	G	C	W	B	0.2					
Wall										
Wall	G	B	H GR	D	0.4					
Baseboard / Assoc. Trim										
Floor	G	C	GY		0.0					
Radiator/Rad Cover										
Shelves										
Post	G	M	GY		0.0					
DOOR TYPE 1										
Door	G	M	GY	C	0.0					
Casing	↓	↓	↓	↓	0.0					
Jamb					0.0					
Stop					0.2					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION	SUBSTRATE		WP=WALLPAPER		PP=PURPLE
G = GOOD (NO VISABLE DAMAGE)	P = PLASTER	B = BRICK	V = VARNISH	C = CREAM	Y = YELLOW
F= FAIR (LESS THAN 10% DAMAGE)	SR = SHEETROCK	C = CONRETE	S = STAIN	T = TAN	R = RED
P = POOR (GREATER THAN 10% DAMAGE	W = WOOD	O = OTHER	BL = BLUE	GY = GREY	P = PINK
	M = METAL		BLK = BLACK	GR = GREEN	BR = BROWN
	CPT = CARPETED				

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: 28 + 29 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling										
Crown Molding										
Wall	G	C	W	A	0.0					
Wall	G P	B	W	B	0.2					
Wall	F	B	W	C	0.3					
Wall	WP	B	GR	D	0.1					
Baseboard / Assoc. Trim										
Floor										
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door	G	WM	GY	B	0.0					
Casing	G	W	GY	↓	0.2					
Jamb	G	W	W		0.1					
Stop	G	W	W	↓	0.0					
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	W	BR	0.0					
Stop	G	W	W	↓	0.2					
Jamb	G	W	W		0.1					
Window Well	F	W	W		79.9					LBP
Sill	G	W	W		0.0					
Sash/Mullion	G	W	W	↓	0.2					
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall upper	G	B	GR	C	0.0					
Wall lower	G	B	GR	C	0.2					
W	G	W	S	A	0.1					

CALIBRATIONS	TIME:			
Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory
PROJECT ADDRESS: St. Johnsbury, Vermont
INSPECTOR: Harland Miller
DATE: December 17 2012
ROOM #: 30-37 Use: LEVEL: BA

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Ceiling	G	M	W		0.0					
Crown Molding										
Wall upper	G	B	GR	A	0.1					
Wall	↓	↓	↓	B	0.2					
Wall	↓	↓	↓	C	0.0					
Wall	P	↓	↓	D	0.0					
Baseboard / Assoc. Trim										
Floor	P	C	GY		0.2					
Radiator/Rad Cover										
Shelves										
DOOR TYPE 1										
Door										
Casing										
Jamb										
Stop										
Threshold										
DOOR TYPE 2										
Door										
Casing										
Jamb										
Stop										
Threshold										
WINDOW TYPE 1										
Casing/Apron	G	W	T	D6	0.0					
Stop				↓						
Jamb				↓						
Window Well	G	W	T	↓	3.0					LBP
Sill	G	W	T	↓	0.1					
Sash/Mullion										
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
Wall lower	G	B	GR	A	0.2					
	↓	↓	↓	B	0.5					
	↓	↓	↓	C	0.1					
	P	↓	↓	D	0.0					

CALIBRATIONS TIME:

Manufacture's Block	Block Tested Value: 1.0	1st Reading:	2nd Reading:	3rd Reading:
NIST Block (30 sec.)	NIST Value: 1.02	1st Reading:	2nd Reading:	3rd Reading:
Zero Lead Reference:		1st Reading:	2nd Reading:	3rd Reading:

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F= FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAGE

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP= WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP=PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

SITE: St. Johnsbury Armory

PROJECT ADDRESS: St. Johnsbury, Vermont

INSPECTOR: Harland Miller

DATE: December 17 2012

ROOM #: Exterior LEVEL:

1	2	3	4	5	6	7	8	9	10	11
COMPONENT	Condition	Substrate	Color	SIDE	Result mg/cm2	Second Result	Like Components	Paint Chip #	Paint Chip Result	Final Classification
Siding	G	B	—	A	0.0					
Siding	↓	↓	↓	B	0.2					
Siding				C	0.1					
Siding				D	0.0					
Cornerboards										
Facia rear	P	W	W		Assume					
Soffit rear	P	W	W		Assume					
Foundation										
Skirtboard										
Stair risers,tread,stringer										
DOOR TYPE 1										
Door	G	W	GR	D	0.0					
Casing	G	W	GR	D	0.2					
Jamb										
Stop										
Header										
DOOR TYPE 2										
Door	G	W	GR	1	0.0					
Casing	G	W	W	1	0.2					
Jamb										
Stop										
Header										
WINDOW TYPE 1										
Casing/Apron	F	W	W		>9.9		All			LBP
Stop	↓	↓	↓		>9.9		↓			LBP
Jamb	↓	↓	↓		>9.9					LBP
Window Well	F-P	W	W		>9.9					LBP
Sill										
Sash/Mullion	F	W	GR		3.0					LBP
WINDOW TYPE 2										
Casing/Apron										
Stop										
Jamb										
Window Well										
Sill										
Sash/Mullion										
S.h. Rock	G	W	W	D	3.0					LBP

CALIBRATIONS TIME: 12/17 1300

Manufacture's Block:	Block Tested Value: 1.0	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
NIST Block: (30 sec.)	NIST Value: 1.02	1st Reading:	1.0	2nd Reading:	1.0	3rd Reading:	1.0
Zero Lead Reference:		1st Reading:	-0.2	2nd Reading:	-0.1	3rd Reading:	0.0

REMARKS:

LEGEND

CONDITION
G = GOOD (NO VISABLE DAMAGE)
F = FAIR (LESS THAN 10% DAMAGE)
P = POOR (GREATER THAN 10% DAMAG

SUBSTRATE
P = PLASTER
SR = SHEETROCK
W = WOOD
M = METAL
CPT = CARPETED
B = BRICK
C = CONRETE
O = OTHER

WP = WALLPAPER
V = VARNISH
S = STAIN
BL = BLUE
BLK = BLACK
C = CREAM
T = TAN
GY = GREY
GR = GREEN
PP = PURPLE
Y = YELLOW
R = RED
P = PINK
BR = BROWN

XRF Protocol

XRF Protocol

LBP testing was performed at the above referenced site. The testing was performed in general conformance to the United States Department of Housing and Urban Development's (HUD) 1997 Revised Chapter 7 of the Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (HUD guidelines), dated June, 1995. HUD guidelines define the term lead based paint as paint or other surface coatings that contain lead equal to or greater than 1.0 mg/cm^2 (by XRF) or 0.5 % by weight (laboratory paint chip analysis).

ATC conducted a LBP survey of accessible interior and exterior surfaces of the main residence. Please refer to to the attached Sample Location Diagrams for a diagram of the building complete with room numbers. For a description of the XRF instrument and procedure, see **Appendix B**: "XRF Protocol". **Appendix C** contains appropriate Lead Certifications.

Areas selected for testing were designated as "room equivalents." Pursuant to the HUD Guidelines, a room equivalent is an identifiable part of a residence, such as a room, a house exterior side or an exterior area. Within each room equivalent, "testing combinations" were identified and tested. A testing combination is characterized by a unique combination of room equivalent, building component types, and substrate (for example: all like painted doors with wood substrate within the same room). Pursuant to the 1997 Revision of Chapter 7 HUD Guidelines, one reading was completed for each testing combination except for walls, where one reading was taken for each wall in the room. Testing combinations were tested by using a LPA-1, serial # 1355, X-Ray Fluorescence Analyzer (XRF).

XRF field screening results are noted on the field sheets included within this report under **Appendix A.** Column one of the field sheets contains the type of component tested, the second column contains the condition of the painted surface, either "G" (good), "F" (fair) or "P" (poor). The third column contains the type of substrate of the component (such as wood, sheet rock, etc.). The fourth column contains the color of the painted surface at the time of the testing. Column five contains the side of the room for which the component was tested, indicated as side A, B, C, or D. As depicted on the Diagram(s) included with this report, side A is the side of the room facing the street, and moving in a clockwise direction each additional side perpendicular to the previous side (i.e. angled walls are not assigned a letter) is given the next consecutive letter. Column six contains the XRF result for that reading, column seven contains the XRF result for that reading if the testing was repeated. Column eight includes other *like components* within the room. *Like components* are similar components in the same room equivalent that should be considered to have identical paint content. If a paint chip sample is collected (due to an inconclusive XRF result or odd shaped component) then column nine contains the paint chip sample number and column ten indicates the corresponding laboratory result.

The abbreviation "LBP" will be entered in column eleven for any component and like components that are identified as lead-based paint.

The bottom of each field sheet also contains an area for remarks provided by the inspector which detail specific conditions noted for that particular area tested.

The LPA-1 Lead Paint Analyzer is a complete lead paint analysis system which quickly, accurately, and non-destructively measures the concentration of LBP on surfaces. The LPA-1 relies on the measurement of the K-shell X-rays to determine the amount of lead present in the painted surface. K-shell X-rays can penetrate many layers of paint and allow a good measurement of the lead content of paint to be made without being significantly affected by the thickness or number of layers of paint on the surface of the sample.

The LPA-1 has the ability to analyze and compute corrections for the differences in the energy spectrums relating to different substrates. This analysis of the energy spectrum means that the lead paint reading

displayed on the instrument already accounts for any substrate effects and no correction is required by the operator. The LPA-1's field of view is limited to a depth of 3/8", deep enough to handle virtually all painted surfaces, but not prone to detect lead objects located behind the surface.

There are two measurement modes of operation in the LPA-1 analyzer namely the "Standard Mode" and the "Quick Mode". In the "Standard" mode, the operator selects a fixed measurement time which remains constant irrespective of the lead signal. In the "Quick" mode, the analyzer automatically adjusts the measurement time to be the least time that is needed to make a definitive measurement with a 95% confidence level (2 sigma). The LPA-1 analyzer will finish a measurement once the 2 sigma confidence level is achieved and the data is statistically meaningful. This time period for conclusive measurements is typically between 1 to 5 seconds, but can extend to a measurement of 60 seconds depending on the action level for abatement. ATC utilized the LPA-1 in the "Quick" mode for the testing performed at this unit. The highest level of LBP reported by the LPA-1 using the "Quick" mode is a result of > 9.9 mg/cm2 (greater than 9.9 mg/cm2). This result indicates LBP significantly over the HUD definition of 1.0 mg/cm2.

A "validation test" was performed to ensure that the instrument was operating properly. The validation test was performed on a calibration test block supplied by the manufacturer, as well as the National Institute for Standards and Testing (NIST) 1.02 mg/cm2 test film to determine if the instrument measured the lead content consistently on a day to day basis. A series of three standard measurements consisting of 60 seconds per measurement were taken on the test blocks. The individual readings were recorded and compared to the factory test data provided with the instrument. Please find validation test results on the enclosed field sheets.

Performance Characteristic Sheet

Performance Characteristic Sheet

EFFECTIVE DATE: **October 25, 2006** **EDITION NO.: 5**

MANUFACTURER AND MODEL:

Make: ***Radiation Monitoring Devices***
Model: ***LPA-1***
Source: ^{57}Co
Note: This sheet supersedes all previous sheets for the XRF instrument of the make, model, and source shown above ***for instruments sold or serviced after June 26, 1995. For other instruments, see prior editions.***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Quick mode or 30-second equivalent standard (Time Corrected) mode readings.

XRF CALIBRATION CHECK LIMITS:

0.7 to 1.3 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

For XRF results below 4.0 mg/cm^2, substrate correction is recommended for:

Metal using 30-second equivalent standard (Time Corrected) mode readings.
None using quick mode readings.

Substrate correction is not needed for:

Brick, Concrete, Drywall, Plaster, and Wood using 30-second equivalent standard (Time Corrected) mode readings
Brick, Concrete, Drywall, Metal, Plaster, and Wood using quick mode readings

THRESHOLDS:

30-SECOND EQUIVALENT STANDARD MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results corrected for substrate bias on metal substrate only	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	0.9
	Plaster	1.0
	Wood	1.0

QUICK MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Readings not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations in July 1995. The instrument that performed testing in September had a new source installed in June 1995 with 12 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.02 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

> Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.
>
> Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.
>
> For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):
>
> $$\text{Correction value} = (1^{st} + 2^{nd} + 3^{rd} + 4^{th} + 5^{th} + 6^{th}\ \textit{Reading}) / 6 - 1.02\ \text{mg/cm}^2$$
>
> Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use either the Quick Mode or 30-second equivalent standard (Time Corrected) Mode readings.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

BIAS AND PRECISION:

Do not use these bias and precision data to correct for substrate bias. These bias and precision data were computed without substrate correction from samples with reported laboratory results less than 4.0 mg/cm^2 lead. The data which were used to determine the bias and precision estimates given in the table below have the following properties. During the July 1995 testing, there were 15 test locations with a laboratory-reported result equal to or greater than 4.0 mg/cm^2 lead. Of these, one 30-second standard mode reading was less than 1.0 mg/cm^2 and none of the quick mode readings were less than 1.0 mg/cm^2. The instrument that tested in July is representative of instruments sold or serviced after June 26, 1995. These data are for illustrative purposes only. Actual bias must be determined on the site. Results provided above already account for bias and precision. Bias and precision ranges are provided to show the variability found between machines of the same model.

30-SECOND STANDARD MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm^2)	PRECISION* (mg/cm^2)
0.0 mg/cm^2	Brick	0.0	0.1
	Concrete	0.0	0.1
	Drywall	0.1	0.1
	Metal	0.3	0.1
	Plaster	0.1	0.1
	Wood	0.0	0.1
0.5 mg/cm^2	Brick	0.0	0.2
	Concrete	0.0	0.2
	Drywall	0.0	0.2
	Metal	0.2	0.2
	Plaster	0.0	0.2
	Wood	0.0	0.2
1.0 mg/cm^2	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.0	0.3
	Metal	0.2	0.3
	Plaster	0.0	0.3
	Wood	0.0	0.3
2.0 mg/cm^2	Brick	-0.1	0.4
	Concrete	-0.1	0.4
	Drywall	-0.1	0.4
	Metal	0.1	0.4
	Plaster	-0.1	0.4
	Wood	-0.1	0.4

*Precision at 1 standard deviation.

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions of this *XRF Performance Characteristics Sheet* did not include both bounds of the inconclusive range as "inconclusive." While this edition of the Performance Characteristics Sheet uses a different system, the specific XRF readings that are considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, so previous inspection results are not affected.

DOCUMENTATION:

An EPA document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD. A HUD document titled *A Nonparametric Method for Estimating the 5th and 95th Percentile Curves of Variable-Time XRF Readings Based on Monotone Regression* provides supplemental information on the methodology for variable-time XRF instruments. A copy of this document can be obtained from the HUD lead web site, www.hud.gov/offices/lead.

This XRF Performance Characteristic Sheet was developed by QuanTech, Inc., under a contract from the U.S. Department of Housing and Urban Development (HUD). HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.*

XRF QA/QC Results

St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont

Repeated Testing for Quality Assurance

December 2012

63.35078.0013

Testing Combination	Initial Result mg/cm2	Retest Result mg/cm2	Average	Square the Average
Door Type 1 Door	-0.3	0.0	-0.15	0.0225
Door Type 1 Casing	0.1	0.1	0.1	0.01
Door Type 1 Jamb	0.0	0.2	0.1	0.01
Door Type 1 Stop	0.2	0.1	0.15	0.0225
Window Casing	0.0	0.1	0.05	0.0025
Window Stop	0.2	0.0	0.1	0.01
Window Jamb	0.1	-0.2	-0.05	0.0025
Window Well	0.3	0.0	0.15	0.0225
Window Sill	0.1	0.1	0.1	0.01
Window Sash	0.3	0.0	0.15	0.0225

add squared averages	0.135	(C)
C x 0.0072	0.000972	(D)
D + 0.032	0.032972	(E)
square root of E	0.181581937	(F)
F x 1.645	0.2987	Retest Tolerance Limit
average of Initial	0.10	
average of retest	0.04	
Absolute Difference	0.06	

Absolute Difference < Retest Tolerance? **Pass**

Appendix D

Lead in Dust Sample Location Diagram
Lead in Dust Laboratory Report

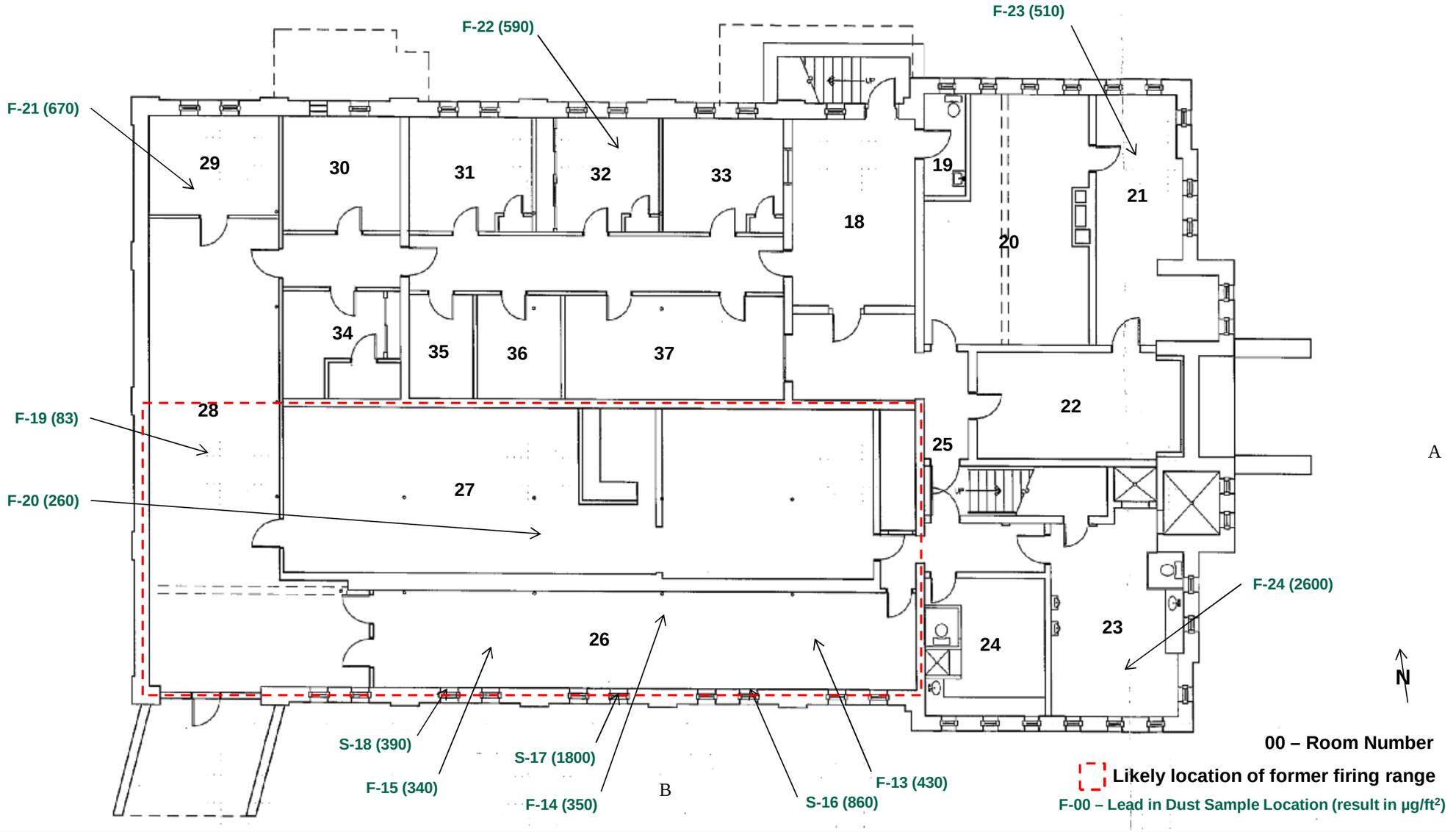
Lead in Dust Sample Location Diagram

D

C

A

B



SAMPLE LOCATION DIAGRAM - Lead

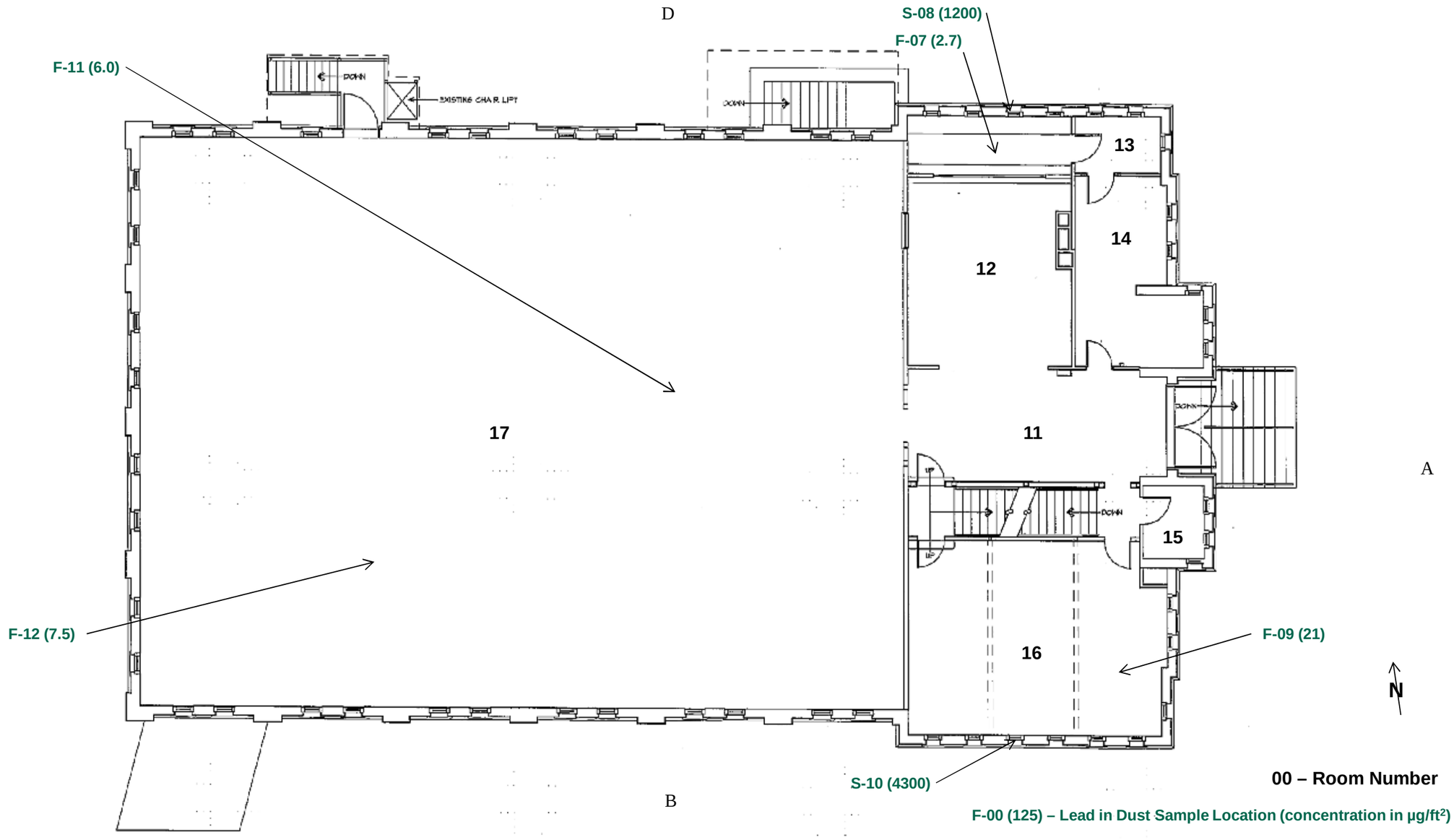
Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM - Lead

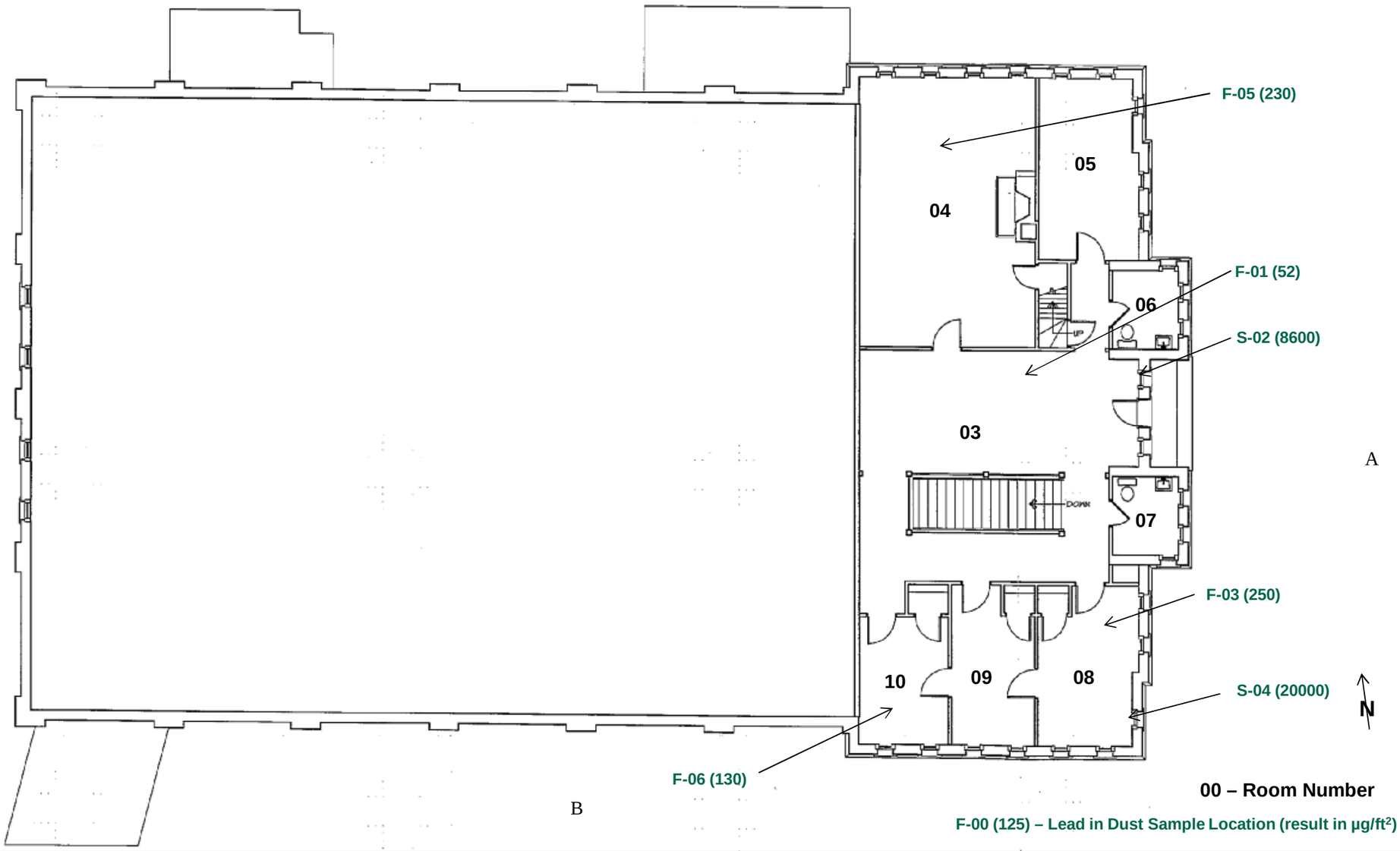
Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



SAMPLE LOCATION DIAGRAM - Lead

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

Lead in Dust Laboratory Report

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495
Phone: (802) 862-1980
Fax: (802) 862-1405

12/31/2012

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/21/2012. The results are tabulated on the attached data pages for the following client designated project:

63.35078.0013

The reference number for these samples is EMSL Order #011205745. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director

The test results contained within this report meet the requirements of NELAC and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10896, PA 68-00367

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order:	011205745
CustomerID:	ATCE53
CustomerPO:	
ProjectID:	

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Received:	12/21/12 2:30 PM
Collected:	12/17/2012

Analytical Results

Client Sample Description F-01 Rm 03 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0001*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	52	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description S-02 Rm 03 Sill — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0002*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	8600	140	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-03 Rm 08 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0003*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	250	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-04 Rm 08 Sill — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0004*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	20000	270	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-05 Rm 04 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0005*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	230	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-06 Rm 10 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	130	2.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-07 Rm 12 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0007*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	2.7	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205745
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/21/12 2:30 PM
Collected: 12/17/2012

Project: **63.35078.0013**

Analytical Results

Client Sample Description S-08 Rm 12 Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0008*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	1200	27	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-09 Rm 16 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0009*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	21	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description S-10 Rm 16 Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0010*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	4300	69	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-11 Rm 17 North Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0011*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	6.0	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description F-12 Rm 17 South Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0012*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	7.5	1.0	µg/ft²	12/26/2012	JS	12/27/2012	BE

Client Sample Description F-13 Rm 26 East Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0013*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	430	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-14 Rm 26 Center Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0014*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	350	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205745
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/21/12 2:30 PM
Collected: 12/17/2012

Project: **63.35078.0013**

Analytical Results

Client Sample Description F-15 Rm 26 West Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0015*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	340	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-16 Rm 26 East Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0016*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	860	11	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-17 Rm 26 Center Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0017*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	1800	27	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description S-18 Rm 26 West Sill — ***Collected:*** 12/17/2012 ***Lab ID:*** *0018*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	390	11	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-19 Rm 28 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0019*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	83	1.0	µg/ft²			12/27/2012	BE

Client Sample Description F-20 Rm 27 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0020*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	260	5.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-21 Rm 29 Floor — ***Collected:*** 12/17/2012 ***Lab ID:*** *0021*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	670	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011205745
CustomerID: ATCE53
CustomerPO:
ProjectID:

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone: (802) 862-1980
Fax: (802) 862-1405
Received: 12/21/12 2:30 PM
Collected: 12/17/2012

Analytical Results

Client Sample Description F-22 Rm 32 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0022*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	590	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-23 Rm 21 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0023*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	510	10	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-24 Rm 23 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0024*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	2600	50	µg/ft²	12/26/2012	JS	12/31/2012	BE

Client Sample Description F-25 Rm 40 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0025*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	ND	1.0	µg/ft²			12/27/2012	BE

Client Sample Description F-26 Rm 41 Floor — ***Collected:*** 12/17/2012 — ***Lab ID:*** *0026*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
6010B	Lead	180	4.0	µg/ft²	12/26/2012	JS	12/31/2012	BE

Definitions:
ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only):* 012205745

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (856) 303-2533
FAX: (856) 786-5974

Company: Cardno ATC	**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 171 Commerce St	
City: Williston **State/Province:** VT	**Zip/Postal Code:** **Country:**
Report To (Name): Harland Miller	**Telephone #:**
Email Address: Harland.Miller@Cardno.com	**Fax #:** **Purchase Order:**
Project Name/Number: 63.35078.0013	**Please Provide Results:** ☐ Fax ☒ Email
U.S. State Samples Taken: Vermont	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☒ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ % by wt. ☐ mg/cm² ☐ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☐
~~Air~~ EMSL SOP 001 Revision 7 2/13/12	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☒
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: H. Miller **Signature of Sampler:**

Sample #	Location	Volume/Area	Date/Time Sampled
	SEE ATTACHED		

RECEIVED
DEC 20 2012
EMSL ANALYTICAL, INC.
CINNAMINSON, NJ

Client Sample #'s P01 - P26 **Total # of Samples:** 26

Relinquished (Client):		**Date:**	12/19/12	**Time:**	
Received (Lab):	Travis Albert	**Date:**	12/21/12	**Time:**	2:30pm

Comments:

- must called due to method being used (EMSL SOP 001 Revision 7 or Pb-FLAA?)
- Called. Eric picked up. gave me Harland Miller's number 1:54pm 12/21/12
- Called Harland Miller's number. He answered but said he will call back to give type of method. He was not sure of method. 1:57pm 12/21/12
- Harland Miller called back. He decided to get ICP-AES method, not Pb-FLAA (lead contact+dust) 2:03pm 12/21/12

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only):*

01120574S

63.35678.0013

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 303-2533
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location		Volume/Area inches	Date/Time Sampled
F-01	Room 03	Floor	12"x12"	12/17/12
S-02	03	Sill	3½x15	
F-03	08	Floor	12x12	
S-04	08	Sill	3½ x15	
F-05	04	Floor	12x12	
F-06	10	Floor	12x12	
F-07	12	Floor	12 x12	
S-08	12	Sill	3½ x15	
F-09	16	Floor	12x12	
S-10	16	Sill	3½ x15	
F-11	17 North	Floor	12x12	
F-12	17 South	Floor	12 x12	
F-13	26 East	Floor	12x12	
F-14	↓ Center	↓	↓	
F-15	↓ West	↓	↓	
S-16	26 East	Sill	~~3½ x~~ 6x22	
S-17	↓ Center	↓	↓	
S-18	↓ West	↓	↓	

Comments/Special Instructions:

RECEIVED
EMSL
CINNAMINSON, NJ
2012 DEC 20 AM 8:58

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only)*:

01205745

63.35078.0013

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 303-2533
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location	Volume/Area Inches	Date/Time Sampled
F-19	Room 28 Floor	12 x 12	12/17/12
F-20	27		
F-21	29		
F-22	32		
F-23	21		
F-24	23		
F-25	40		
F-26	41		

Comments/Special Instructions:

RECEIVED
EMSL
CINNAMINSON, NJ
DEC 27 2012
AM 08:58

Page 3 of 3 pages

Appendix E

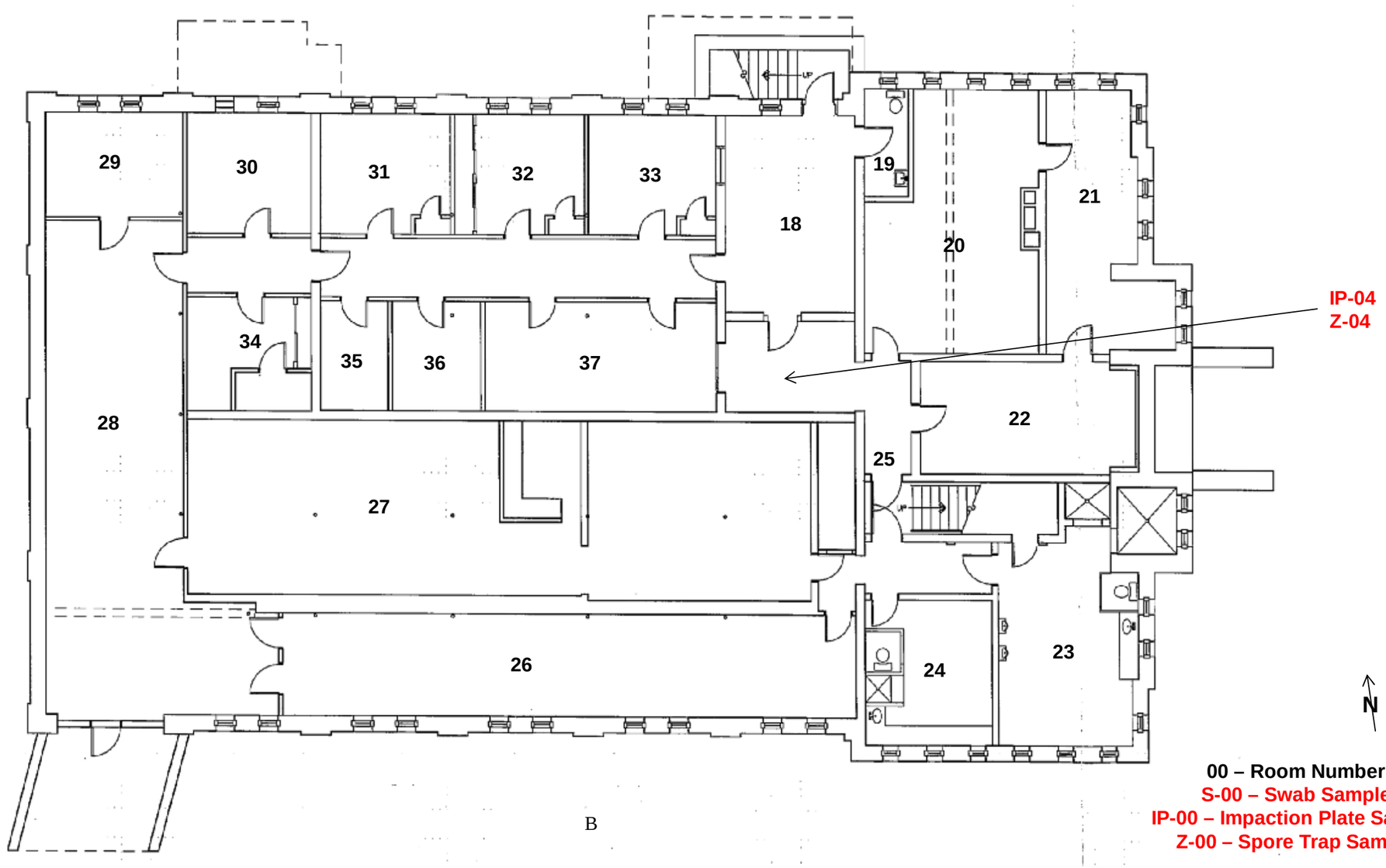
Indoor Air Quality Sample Location Diagram
Indoor Air Quality Laboratory Report

Indoor Air Quality Sample Location Diagram

D

C

A



B

00 – Room Number
S-00 – Swab Sample
IP-00 – Impaction Plate Sample
Z-00 – Spore Trap Sample

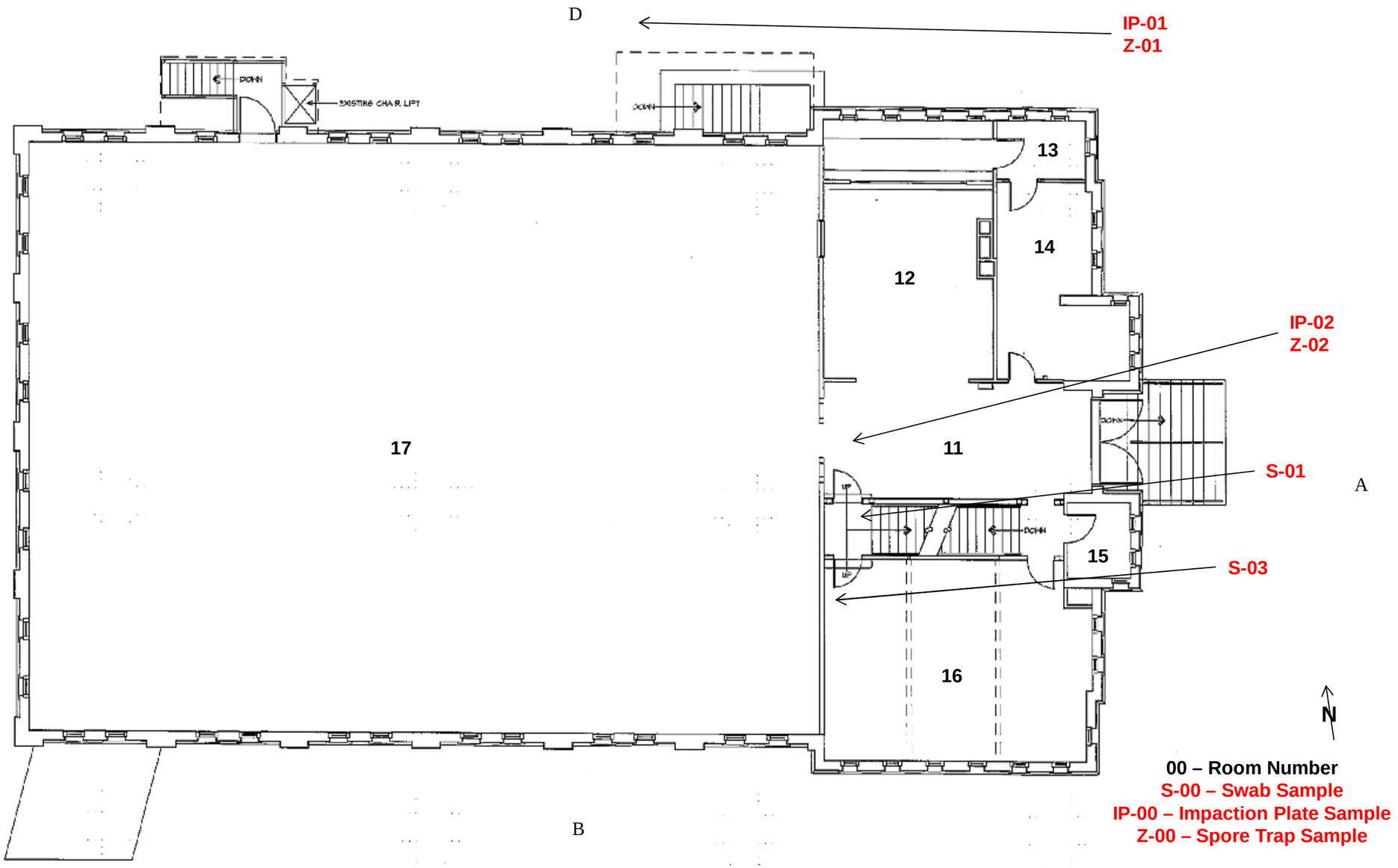
SAMPLE LOCATION DIAGRAM - IAQ

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



00 – Room Number
S-00 – Swab Sample
IP-00 – Impaction Plate Sample
Z-00 – Spore Trap Sample

SAMPLE LOCATION DIAGRAM – IAQ

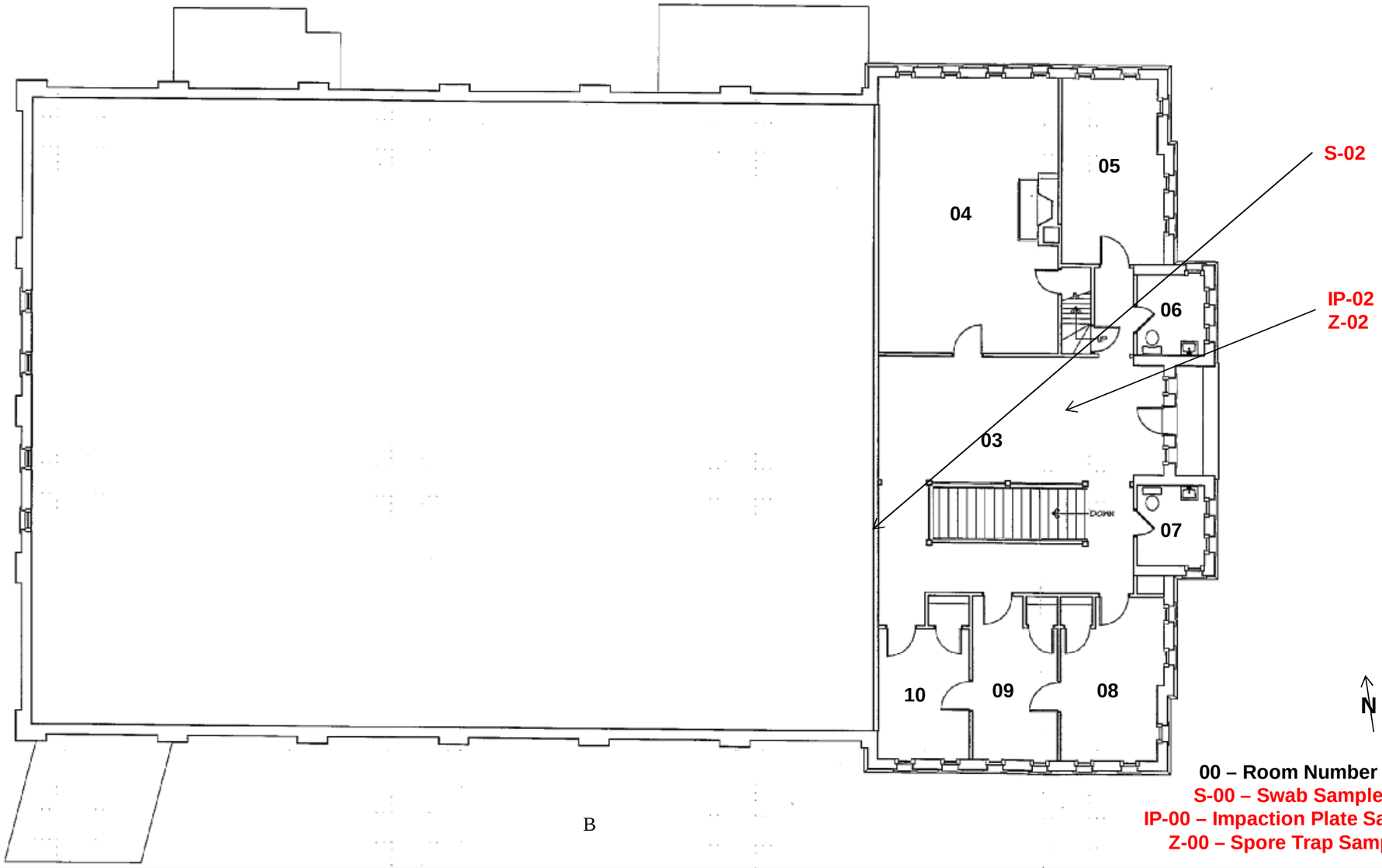
Address: St. Johnsbury Armory – 1st Floor
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale



00 – Room Number
S-00 – Swab Sample
IP-00 – Impaction Plate Sample
Z-00 – Spore Trap Sample

SAMPLE LOCATION DIAGRAM

Address: St. Johnsbury Armory – 2nd Floor
1249 Main Street
St. Johnsbury, Vermont
Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

Indoor Air Quality Laboratory Report

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com / cinnmicrolab@emsl.com

Order ID:	371220373
Customer ID:	ATCE53
Customer PO:	
Project ID:	

Attn: Harland Miller
Cardno ATC
PO Box 1486
Williston, VT 05495

Proj: 63.35078.0013

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Collected:	12/18/2012
Received:	12/20/2012
Analyzed:	01/02/2013

Test Report: Air-O-Cell Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	371220373-0006			371220373-0007			371220373-0008		
Client Sample ID:	Z-01			Z-02			Z-03		
Volume (L):	150			150			150		
Sample Location:	Ext north door			Room 03			Room 11		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria	1*	7*	2.9	-	-	-	1*	7*	3.7
Ascospores	7	100	20.6	-	-	-	1*	7*	3.7
Aspergillus/Penicillium	21	430	61.8	20	410	66.7	11	230	40.7
Basidiospores	3	60	8.8	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1*	7*	2.9	6	100	20	1	20	3.7
Curvularia	-	-	-	-	-	-	1*	7*	3.7
Epicoccum	1*	7*	2.9	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	20	3.3	5	100	18.5
Myxomycetes++	-	-	-	2	40	6.7	3*	20*	11.1
Pithomyces	-	-	-	-	-	-	1	20	3.7
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	1*	7*	3.7
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1*	7*	3.3	2	40	7.4
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**34**	**611**	**100**	**30**	**577**	**100**	**27**	**458**	**100**
Hyphal Fragment	1*	7*	-	1	20	-	1	20	-
Insect Fragment	-	-	-	-	-	-	1*	7*	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	3	-

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC–EMLAP Lab 100194

Initial report from: 01/02/2013 10:58:31

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com / cinnmicrolab@emsl.com

Order ID:	371220373
Customer ID:	ATCE53
Customer PO:	
Project ID:	

Attn: Harland Miller
Cardno ATC
PO Box 1486
Williston, VT 05495

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Collected:	12/18/2012
Received:	12/20/2012
Analyzed:	01/02/2013

Proj: 63.35078.0013

Test Report: Air-O-Cell Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	371220373-0009			371220373-0010			
Client Sample ID:	Z-04			Z-05			
Volume (L):	150			150			
Sample Location:	Room 25			Room 40			
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	
Alternaria	-	-	-	-	-	-	
Ascospores	1	20	0.6	-	-	-	
Aspergillus/Penicillium	139	2850	87.4	-	-	-	
Basidiospores	-	-	-	-	-	-	
Bipolaris++	-	-	-	-	-	-	
Chaetomium	-	-	-	-	-	-	
Cladosporium	13	270	8.2	-	-	-	
Curvularia	-	-	-	-	-	-	
Epicoccum	1*	7*	0.6	-	-	-	
Fusarium	-	-	-	-	-	-	
Ganoderma	-	-	-	-	-	-	
Myxomycetes++	2*	10*	1.3	-	-	-	
Pithomyces	-	-	-	-	-	-	
Rust	-	-	-	-	-	-	
Scopulariopsis	1	20	0.6	-	-	-	
Stachybotrys	2*	10*	1.3	-	-	-	
Torula	-	-	-	-	-	-	
Ulocladium	-	-	-	-	-	-	
Unidentifiable Spores	-	-	-	-	-	-	
Zygomycetes	-	-	-	-	-	-	
Total Fungi	**159**	**3187**	**100**	-	**No Trace**	-	
Hyphal Fragment	1	20	-	-	-	-	
Insect Fragment	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	21	-	-	21	-	
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	
Skin Fragments (1-4)	-	2	-	-	-	-	
Fibrous Particulate (1-4)	-	1	-	-	-	-	
Background (1-5)	-	2	-	-	-	-	

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 01/02/2013 10:58:31

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com cinnmicrolab@emsl.com

EMSL Order:	371220373
CustomerID:	ATCE53
CustomerPO:	
ProjectID:	

Attn: **Harland Miller**
Cardno ATC
PO Box 1486

Williston, VT 05495

Project: **63.35078.0013**

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Received:	12/20/12 11:00 AM
Analysis Date:	12/27/2012
Collected:	12/18/2012

Test Report: Viable Fungi Identification and Enumeration (Genus Level ID from Plate and Strip Impactors (EMSL Method M005))

Sample Description	Location	Volume (L)	Media	Incubation Temp (C)	Sensitivity (CFU/m³)	Fungal Identification	Colony Count	CFU/m³
IP-01	Ext north door	136.45	MEA	25	7	*Aspergillus sp.*	1	7
371220373-0001						*Penicillium sp.*	5	35
						Sterile(dark)	1	7
						Sterile(white)	4	28
						Yeast	3	21
						Total	**14**	**98**
IP-02	Room 03	136.45	MEA	25	7	*Aspergillus sp.*	24	168
371220373-0002						*Cladosporium sp.*	2	14
						Penicillium sp.	2	14
						Sterile(white)	2	14
						Total	**30**	**210**
IP-03	Room 11	136.45	MEA	25	7	*Aspergillus sp.*	63	441
371220373-0003						*Cladosporium sp.*	1	7
						Penicillium sp.	7	49
						Sterile(white)	2	14
						Total	**73**	**511**
IP-04	Room 25	136.45	MEA	25	7	*Aspergillus sp.*	31	217
371220373-0004						*Penicillium sp.*	3	21
						Scopulariopsis sp.	2	14
						Total	**36**	**252**
IP-05	Room 40	136.45	MEA	25	7	**None Detected**		
371220373-0005								

No discernable blank was submitted with this group of samples.

Analyst(s)

Zeljko Jurjevic (5)

Farbod Nekouei, M.S., Laboratory Manager
or other approved signatory

Positive hole correction factors have not been applied to the reported data. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. Interpretation of the data contained in this report is the responsibility of the client. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. The detection limit is equal to 1 colony forming unit (CFU) per agar plate.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from 12/27/2012 19:16:52

THIS IS THE LAST PAGE OF THE REPORT.

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number *(Lab Use Only)*: 371220373

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX:(856) 786-0262

Company : Cardno ATC		**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: 11 Commerce St.			
City: Williston	**State/Province:** VT	**Zip/Postal Code:**	**Country:**
Report To (Name): Harland Miller		**Telephone #:**	
Email Address: Harland.Miller@Cardno.com		**Fax #:**	**Purchase Order:**
Project Name/Number: 63.35678.0013		**Please Provide Results:** ☐ Fax ☒ Email ☐ Fax	
U.S. State Samples Taken: Vermont		**Connecticut Samples:** ☐ Commercial ☐ Residential	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	☐ 72 Hour	☐ 96 Hour	☐ 1 Week	☒ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements*

Non Culturable Air Samples (Spore Traps) – Test Codes

• **M001** Air-O-Cell	• **M173** Allegro M2	• **M004** Allergenco	• **M032** Allergenco-D	• **M172** Versa Trap
• **M049** BioSIS	• **M003** Burkard	• **M043** Cyclex	• **M002** Cyclex-d	
• **M030** Micro 5	• **M174** MoldSnap	• **M176** Relle Smart	• **M130** Via-Cell	

Other Microbiology Test Codes

• **M041** Fungal Direct Examination	• **M014** Endotoxin Analysis	• **M029** *Enterococci*
• **M005** Viable Fungi ID and Count	• **M015** Heterotrophic Plate Count	• **M019** Fecal Coliform
• **M006** Viable Fungi ID and Count (Speciation)	• **M180** Real Time Q-PCR-ERMI 36	• **M133** MRSA Analysis
• **M007** Culturable Fungi	• Panel	• **M028** *Cryptococcus neoformans*
• **M008** Culturable Fungi (Speciation)	• **M018** Total Coliform	Detection
• **M009** Gram Stain Culturable Bacteria	(Membrane Filtration)	• **M120** *Histoplasma capsulatum*
• **M010** Bacterial Count and ID – 3 Most	• **M020** Fecal *Streptococcus*	Detection
Prominent	(Membrane Filtration)	• **M033-39** Allergen Testing
• **M011** Bacterial Count and ID – 5 Most	• **M210-215** *Legionella* Detection	• **M044** Group Allergen
Prominent	• **M026** Recreational Water Screen	(Cat, Dog, Cockroach, Dustmites)
• **M013** Sewage Contamination in Buildings	• **M027** Mycotoxin Analysis	• **Other** See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: **Signature of Sampler:**

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
	SEE ATTACHED				

2012 DEC 20 AM 11:53

Client Sample # (s): IP01 - IP-05 201 - 205 **Total # of Samples:** 10

Relinquished (Client): **Date:** 12/19/12 **Time:** 1800

Received (Client): FX **Date:** 12/20/12 **Time:** 1108

Comments:

Received 12/20/12

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*):

3712 20373

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX:(856) 786-0262

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
IP-01	Ext. North Door	AIR	M005	136.45 L	12/18/12
IP-02	Room 03	↓	↓	↓	↓
IP-03	Room 11				
IP-04	Room 25				
IP-05	Room 40		↓	↓	
2-01	Ext. North Door		M001	150L	
2-02	Room 03		↓	↓	
2-03	Room 11				
2-04	Room 25				
2-05	Room 40	↓	↓	↓	↓

2012 DEC 20 AM 11:53

Comments/Special Instructions:

received 12/20/12

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.emsl.com / cinnmicrolab@emsl.com

Order ID:	371220822
Customer ID:	ATCE53
Customer PO:	
Project ID:	

Attn: Jesse Stratton
Cardno ATC
PO Box 1486
Williston, VT 05495

Phone:	(802) 862-1980
Fax:	(802) 862-1405
Collected:	12/28/2012
Received:	12/31/2012
Analyzed:	01/02/2013

Proj: 63.35078.0013

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Swab Samples (EMSL Method: M041)

Lab Sample Number:	371220822-0001	371220822-0002	371220822-0003	371220822-0004	
Client Sample ID:	S-01	S-03 3rd Fl	S-03	S-04	
Sample Location:	31B @ Bottom of Stairs	Rm 3 West Wall Under Paint	Rm 16 NW Corner on Joists	Blank	
Spore Types	Category	Category	Category	Category	
Agrocybe/Coprinus	-	-	-	-	
Alternaria	-	-	-	-	
Ascospores	-	-	-	-	
Aspergillus/Penicillium	-	Rare	-	-	
Basidiospores	-	-	-	-	
Bipolaris++	-	-	-	-	
Chaetomium	*High*	-	-	-	
Cladosporium	-	Rare	-	-	
Curvularia	-	-	-	-	
Epicoccum	-	-	-	-	
Fusarium	-	-	-	-	
Ganoderma	-	-	-	-	
Myxomycetes++	-	-	-	-	
Paecilomyces	-	-	-	-	
Rust	-	-	-	-	
Scopulariopsis	-	-	-	-	
Stachybotrys	-	-	-	-	
Torula	-	-	-	-	
Ulocladium	-	-	-	-	
Unidentifiable Spores	-	-	-	-	
Zygomycetes	-	-	-	-	
Aspergillus	*Rare*	-	-	-	
Penicillium	*Medium*	-	-	-	
Fibrous Particulate	-	-	-	-	
Hyphal Fragment	-	-	-	-	
Insect Fragment	-	-	-	-	
Pollen	-	-	-	-	

Sample Comment: 371220822-0003 None Detected
Sample Comment: 371220822-0004 None Detected

Category: Count/per area analyzed
Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut
* = Sample contains fruiting structures and/or hyphae associated with the spores.

Farbod Nekouei, M.S., Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation of the data contained in this report is the responsibility of the client. "-" denotes not detected. Samples received in good condition unless otherwise noted.
Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC–EMLAP Accredited #100194

Initial report from: 01/02/2013 09:38:05

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 371220822

Company : Cardno ATC	**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 171 Commerce Street PO Box 1486	
City: Williston **State/Province:** VT	**Zip/Postal Code:** 05495 **Country:** United States
Report To (Name): Jesse Stratton	**Telephone #:** 802-862-1980
Email Address: jesse.stratton@cardno.com	**Fax #:** **Purchase Order:**
Project Name/Number: 63.35078.0013	**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail
U.S. State Samples Taken: VT	**Connecticut Samples:** ☐ Commercial ☐ Residential

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements*

Non Culturable Air Samples (Spore Traps) – Test Codes

- **M001** Air-O-Cell
- **M049** BioSIS
- **M030** Micro 5
- **M173** Allegro M2
- **M003** Burkard
- **M174** MoldSnap
- **M004** Allergenco
- **M043** Cyclex
- **M176** Relle Smart
- **M032** Allergenco-D
- **M002** Cyclex-d
- **M130** Via-Cell
- **M172** Versa Trap

Other Microbiology Test Codes

- **M041** Fungal Direct Examination
- **M005** Viable Fungi ID and Count
- **M006** Viable Fungi ID and Count (Speciation)
- **M007** Culturable Fungi
- **M008** Culturable Fungi (Speciation)
- **M009** Gram Stain Culturable Bacteria
- **M010** Bacterial Count and ID – 3 Most Prominent
- **M011** Bacterial Count and ID – 5 Most Prominent
- **M013** Sewage Contamination in Buildings
- **M014** Endotoxin Analysis
- **M015** Heterotrophic Plate Count
- **M180** Real Time Q-PCR-ERMI 36 Panel
- **M018** Total Coliform (Membrane Filtration)
- **M020** Fecal *Streptococcus* (Membrane Filtration)
- **M210-215** *Legionella* Detection
- **M026** Recreational Water Screen
- **M027** Mycotoxin Analysis
- **M029** *Enterococci*
- **M019** Fecal Coliform
- **M133** MRSA Analysis
- **M028** *Cryptococcus neoformans* Detection
- **M120** *Histoplasma capsulatum* Detection
- **M033-39** Allergen Testing
- **M044** Group Allergen (Cat, Dog, Cockroach, Dustmites)
- **Other** See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: **Signature of Sampler:**

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
S-01	316 C bottom of stairs	Swab	M049	1 in²	12/28/12 1600
S-02	RM3 West wall water Joint	Swab	M041	1 in²	12/28/12 1605
S-03	RM16 NW Corner on Joists	Swab	M041	1 in²	12/28/12 1610
S-04	Blank	Swab	M041	1 in²	12/28/12 1620

Client Sample # (s): S-01 - S-04 **Total # of Samples:** 4

Relinquished (Client): **Date:** 12/28/12 **Time:** 1630

Received (Client): KD FX **Date:** 12-31-2012 **Time:** 8:40 AM

Comments:

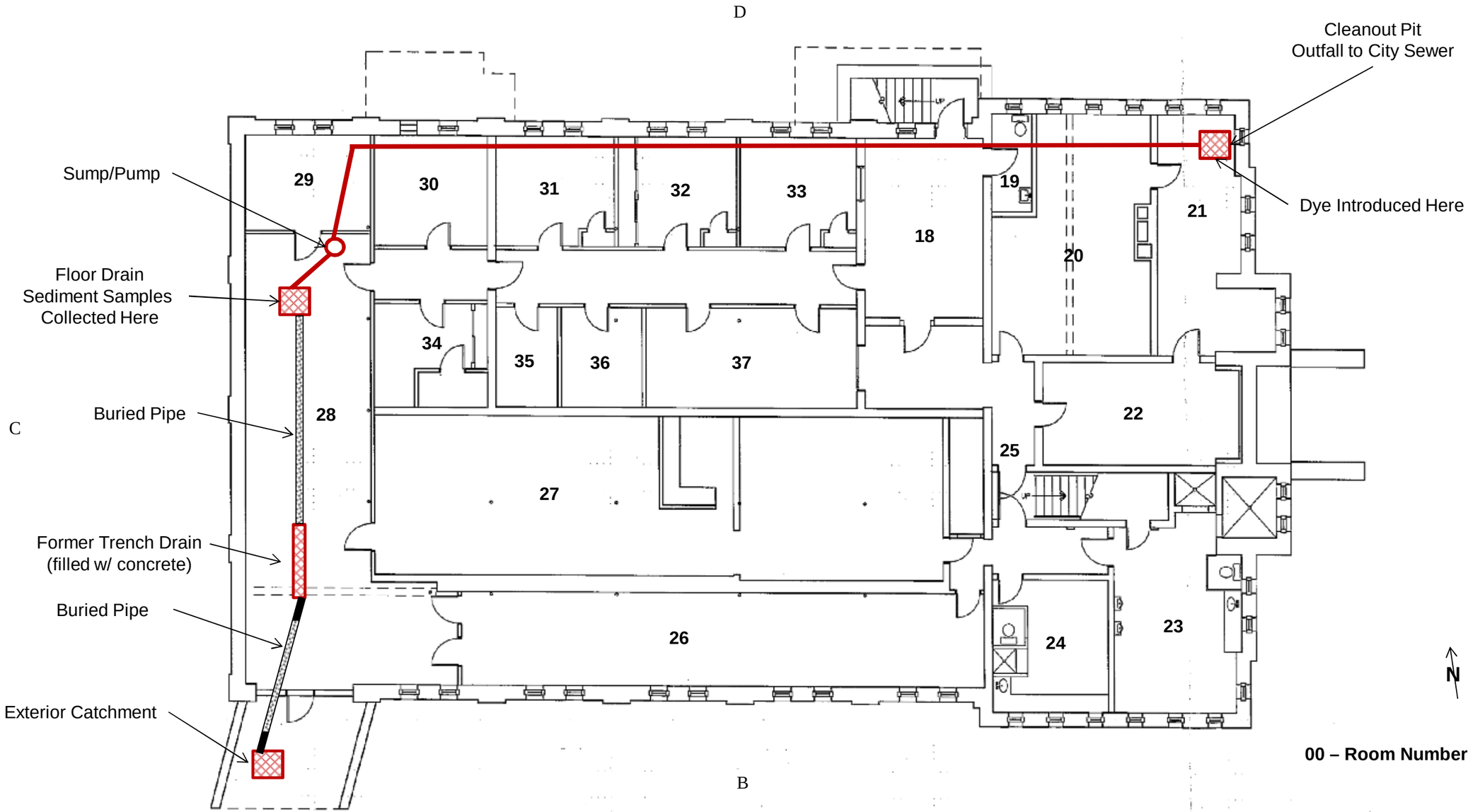
received HV 12/31/12

(4)

Appendix F

Diagram of Floor Drains and Sediment Samples
Sediment Sample Laboratory Report

Diagram of Floor Drains and Sediment Samples



SAMPLE LOCATION DIAGRAM - Drains

Address: St. Johnsbury Armory - Basement
1249 Main Street
St. Johnsbury, Vermont

Project Number: 063.35078.0013

Cardno ATC
Shaping the Future
171 Commerce St. Williston, Vermont 05495
Phone:(802) 862-1980 Fax: (802) 862-1405

SOURCE : Field Notes

SCALE: Not to scale

Sediment Sample Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 200-14287-1

Job Description: St. J Armory

For:
Cardno ATC
171 Commerce Street
PO BOX 1486
Williston, VT 05495

Attention: Mr. Stephen Znamierowski

Approved for release.
Sara S Goff
Project Manager I
2/5/2013 8:42 AM

Sara S Goff
Project Manager I
sara.goff@testamericainc.com
02/05/2013
Revision: 1

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

CASE NARRATIVE

Client: Cardno ATC

Project: St. J Armory

Report Number: 200-14287-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/19/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.0 C.

Client has revised Chain-of-Custody with sample identifiers that match what is recorded on the container labels.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples S-07 and S-08 were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/20/2012 and analyzed on 01/03/2013, 12/28/2012 and 12/31/2012.

Sample S-08 required a dilution which was performed outside of the analytical holding time. The original undiluted analysis which was performd within analytical hodling time has also been provided.

Due to poor aquisition of both low level sample aliquots the medium level aliquot was analyzed and reported.

Several analytes were detected in method blank MB 200-50187/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the volatiles analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS
Samples S-01 and S-02 were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 12/31/2012 and analyzed on 01/04/2013.

Samples S-01[3X] and S-02[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

METALS (ICP)
Samples S-05 and S-06 were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 12/28/2012 and analyzed on 12/29/2012.

The serial dilution performed for sample S-05 was outside control limits for Chromium, Copper, Nickle, and Zinc. The post digestion spike percent recovery for sample S-05 was outside of control limits for Beryllium, Cadmium, Chromium, Copper, Nickle, Selenium, and Zinc.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

MERCURY
Samples S-03 and S-04 were analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared on 12/26/2012 and analyzed on 12/28/2012.

Hg was detected in method blank MB 200-50058/11-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: Cardno ATC

Job Number: 200-14287-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
200-14287-1	S-01					
Diesel Range Organics [C10-C28]		120		24	mg/Kg	8015B
Percent Solids		84.1		0.25	%	Moisture
200-14287-2	S-02					
Diesel Range Organics [C10-C28]		170		41	mg/Kg	8015B
Percent Solids		82.3		0.25	%	Moisture
200-14287-3	S-03					
Hg		0.063	B	0.036	mg/Kg	7471B
Percent Solids		84.2		0.25	%	Moisture
200-14287-4	S-04					
Hg		0.054	B	0.035	mg/Kg	7471B
Percent Solids		86.7		0.25	%	Moisture
200-14287-5	S-05					
Antimony		0.54	J	5.3	mg/Kg	6010C
Arsenic		2.5		0.88	mg/Kg	6010C
Beryllium		0.38	J	0.44	mg/Kg	6010C
Cadmium		0.45		0.44	mg/Kg	6010C
Chromium		19.3		0.88	mg/Kg	6010C
Copper		56.4		2.2	mg/Kg	6010C
Lead		62.1		0.88	mg/Kg	6010C
Nickel		20.1		3.5	mg/Kg	6010C
Zinc		101		1.8	mg/Kg	6010C
Percent Solids		84.0		0.25	%	Moisture
200-14287-6	S-06					
Antimony		0.57	J	3.7	mg/Kg	6010C
Arsenic		2.0		0.62	mg/Kg	6010C
Beryllium		0.34		0.31	mg/Kg	6010C
Cadmium		0.59		0.31	mg/Kg	6010C
Chromium		18.3		0.62	mg/Kg	6010C
Copper		53.1		1.5	mg/Kg	6010C
Lead		82.6		0.62	mg/Kg	6010C
Nickel		18.4		2.5	mg/Kg	6010C
Zinc		127		1.2	mg/Kg	6010C
Percent Solids		85.5		0.25	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Cardno ATC

Job Number: 200-14287-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
200-14287-7	S-07					
Bromomethane		37	J	120	ug/Kg	8260B
Acetone		310	J	600	ug/Kg	8260B
Methyl acetate		120		120	ug/Kg	8260B
Percent Solids		84.2		0.25	%	Moisture
200-14287-8	S-08					
Acetone		6000	H	620	ug/Kg	8260B
Acetone		1200	E	5.0	ug/Kg	8260B
Methyl acetate		130	H	120	ug/Kg	8260B
Styrene		47	J H	120	ug/Kg	8260B
1,2,4-Trichlorobenzene		0.42	J B	5.0	ug/Kg	8260B
Naphthalene		0.80	J B	5.0	ug/Kg	8260B
1,2,3-Trichlorobenzene		0.42	J B	5.0	ug/Kg	8260B
Percent Solids		86.7		0.25	%	Moisture

METHOD SUMMARY

Client: Cardno ATC

Job Number: 200-14287-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Closed System Purge and Trap	TAL BUR		SW846 5035
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Purge and Trap	TAL BUR		SW846 5035
Diesel Range Organics (DRO) (GC)	TAL BUR	SW846 8015B	
Ultrasonic Extraction	TAL BUR		SW846 3550C
Metals (ICP)	TAL BUR	SW846 6010C	
Preparation, Metals	TAL BUR		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL BUR	SW846 7471B	
Preparation, Mercury	TAL BUR		SW846 7471B
Percent Moisture	TAL BUR	EPA Moisture	

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Cardno ATC

Job Number: 200-14287-1

Method	Analyst	Analyst ID
SW846 8260B	Keene, Angela H	AHK
SW846 8260B	Phillips, Mark T	MTP
SW846 8015B	Wilbur, Janelle S	JSW
SW846 6010C	Kvasnak, Ethan T	ETK
SW846 7471B	Pham, Vu T	VTP
EPA Moisture	Fodge, John F	JFF
EPA Moisture	Kirchner, Benjamin	HO

SAMPLE SUMMARY

Client: Cardno ATC

Job Number: 200-14287-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-14287-1	S-01	Solid	12/17/2012 1112	12/19/2012 1530
200-14287-2	S-02	Solid	12/17/2012 1112	12/19/2012 1530
200-14287-3	S-03	Solid	12/17/2012 1119	12/19/2012 1530
200-14287-4	S-04	Solid	12/17/2012 1119	12/19/2012 1530
200-14287-5	S-05	Solid	12/17/2012 1126	12/19/2012 1530
200-14287-6	S-06	Solid	12/17/2012 1126	12/19/2012 1530
200-14287-7	S-07	Solid	12/18/2012 1100	12/19/2012 1530
200-14287-8	S-08	Solid	12/18/2012 1101	12/19/2012 1530

SAMPLE RESULTS

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-07

Lab Sample ID: 200-14287-7
Client Matrix: Solid

% Moisture: 15.8

Date Sampled: 12/18/2012 1100
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50167	Instrument ID:	L.i
Prep Method:	5035	Prep Batch:	200-49811	Lab File ID:	lilc08.d
Dilution:	1.0			Initial Weight/Volume:	5.359 g
Analysis Date:	12/31/2012 1332			Final Weight/Volume:	10 mL
Prep Date:	12/20/2012 0937				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		120	U	25	120
Chloromethane		120	U	31	120
Vinyl chloride		120	U	24	120
Bromomethane		37	J	30	120
Chloroethane		120	U	18	120
Trichlorofluoromethane		120	U	16	120
1,1-Dichloroethene		120	U	26	120
Freon TF		120	U	22	120
Acetone		310	J	110	600
Methyl iodide		120	U	8.9	120
Carbon disulfide		120	U	19	120
Methyl acetate		120		25	120
Methylene Chloride		120	U	32	120
trans-1,2-Dichloroethene		120	U	24	120
1,2-Dichloroethene, Total		120	U	22	120
Methyl t-butyl ether		120	U	22	120
1,1-Dichloroethane		120	U	24	120
Vinyl acetate		120	U	53	120
2,2-Dichloropropane		120	U	26	120
cis-1,2-Dichloroethene		120	U	22	120
2-Butanone		600	U	100	600
Bromochloromethane		120	U	23	120
Tetrahydrofuran		1700	U	270	1700
Chloroform		120	U	23	120
1,1,1-Trichloroethane		120	U	24	120
Cyclohexane		120	U	24	120
1,1-Dichloropropene		120	U	24	120
Carbon tetrachloride		120	U	18	120
Isobutyl alcohol		6000	U	1100	6000
Benzene		120	U	25	120
1,2-Dichloroethane		120	U	20	120
Trichloroethene		120	U	20	120
Methylcyclohexane		120	U	22	120
1,2-Dichloropropane		120	U	23	120
Dibromomethane		120	U	23	120
1,4-Dioxane		6000	U	1300	6000
Bromodichloromethane		120	U	23	120
2-Chloroethyl vinyl ether		120	U	20	120
cis-1,3-Dichloropropene		120	U	22	120
4-Methyl-2-pentanone		600	U	130	600
Toluene		120	U	24	120
trans-1,3-Dichloropropene		120	U	20	120
1,1,2-Trichloroethane		120	U	23	120
Tetrachloroethene		120	U	24	120
1,3-Dichloropropane		120	U	19	120
2-Hexanone		600	U	93	600

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-07

Lab Sample ID: 200-14287-7
Client Matrix: Solid

% Moisture: 15.8

Date Sampled: 12/18/2012 1100
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B
Prep Method: 5035
Dilution: 1.0
Analysis Date: 12/31/2012 1332
Prep Date: 12/20/2012 0937

Analysis Batch: 200-50167
Prep Batch: 200-49811

Instrument ID: L.i
Lab File ID: lilc08.d
Initial Weight/Volume: 5.359 g
Final Weight/Volume: 10 mL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dibromochloromethane		120	U	19	120
1,2-Dibromoethane		120	U	23	120
Chlorobenzene		120	U	24	120
1,1,1,2-Tetrachloroethane		120	U	24	120
Ethylbenzene		120	U	24	120
m&p-Xylene		120	U	45	120
o-Xylene		120	U	25	120
Xylenes, Total		120	U	25	120
Styrene		120	U	20	120
Bromoform		120	U	20	120
Isopropylbenzene		120	U	23	120
Bromobenzene		120	U	24	120
1,1,2,2-Tetrachloroethane		120	U	22	120
1,2,3-Trichloropropane		120	U	22	120
n-Propylbenzene		120	U	24	120
2-Chlorotoluene		120	U	26	120
4-Chlorotoluene		120	U	26	120
1,3,5-Trimethylbenzene		120	U	24	120
tert-Butylbenzene		120	U	22	120
1,2,4-Trimethylbenzene		120	U	22	120
sec-Butylbenzene		120	U	23	120
1,3-Dichlorobenzene		120	U	23	120
4-Isopropyltoluene		120	U	23	120
1,4-Dichlorobenzene		120	U	23	120
1,2-Dichlorobenzene		120	U	24	120
n-Butylbenzene		120	U	23	120
1,2-Dibromo-3-Chloropropane		120	U	20	120
1,2,4-Trichlorobenzene		120	U	24	120
Hexachlorobutadiene		120	U	19	120
Naphthalene		120	U	18	120
1,2,3-Trichlorobenzene		120	U	23	120

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	94		80 - 120
Toluene-d8	96		80 - 120
Bromofluorobenzene	92		80 - 125
1,2-Dichlorobenzene-d4	89		75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50254	Instrument ID:	L.i
Prep Method:	5035	Prep Batch:	200-49811	Lab File ID:	lilf08.d
Dilution:	1.0			Initial Weight/Volume:	4.951 g
Analysis Date:	01/03/2013 0105			Final Weight/Volume:	10 mL
Prep Date:	12/20/2012 0937				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		120	U H	26	120
Chloromethane		120	U H	32	120
Vinyl chloride		120	U H	25	120
Bromomethane		120	U H	31	120
Chloroethane		120	U H	19	120
Trichlorofluoromethane		120	U H	16	120
1,1-Dichloroethene		120	U H	27	120
Freon TF		120	U H	22	120
Acetone		6000	H	110	620
Methyl iodide		120	U H	9.2	120
Carbon disulfide		120	U H	20	120
Methyl acetate		130	H	26	120
Methylene Chloride		120	U H	34	120
trans-1,2-Dichloroethene		120	U H	25	120
1,2-Dichloroethene, Total		120	U H	22	120
Methyl t-butyl ether		120	U H	22	120
1,1-Dichloroethane		120	U H	25	120
Vinyl acetate		120	U H	55	120
2,2-Dichloropropane		120	U H	27	120
cis-1,2-Dichloroethene		120	U H	22	120
2-Butanone		620	U H	110	620
Bromochloromethane		120	U H	24	120
Tetrahydrofuran		1700	U H	270	1700
Chloroform		120	U H	24	120
1,1,1-Trichloroethane		120	U H	25	120
Cyclohexane		120	U H	25	120
1,1-Dichloropropene		120	U H	25	120
Carbon tetrachloride		120	U H	19	120
Isobutyl alcohol		6200	U H	1200	6200
Benzene		120	U H	26	120
1,2-Dichloroethane		120	U H	21	120
Trichloroethene		120	U H	21	120
Methylcyclohexane		120	U H	22	120
1,2-Dichloropropane		120	U H	24	120
Dibromomethane		120	U H	24	120
1,4-Dioxane		6200	U H	1400	6200
Bromodichloromethane		120	U H	24	120
2-Chloroethyl vinyl ether		120	U H	21	120
cis-1,3-Dichloropropene		120	U H	22	120
4-Methyl-2-pentanone		620	U H	130	620
Toluene		120	U H	25	120
trans-1,3-Dichloropropene		120	U H	21	120
1,1,2-Trichloroethane		120	U H	24	120
Tetrachloroethene		120	U H	25	120
1,3-Dichloropropane		120	U H	20	120
2-Hexanone		620	U H	96	620

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50254	Instrument ID:	L.i
Prep Method:	5035	Prep Batch:	200-49811	Lab File ID:	lif08.d
Dilution:	1.0			Initial Weight/Volume:	4.951 g
Analysis Date:	01/03/2013 0105			Final Weight/Volume:	10 mL
Prep Date:	12/20/2012 0937				

Analyte (DryWt Corrected: Y)	Result (ug/Kg)	Qualifier	MDL	RL
Dibromochloromethane	120	U H	20	120
1,2-Dibromoethane	120	U H	24	120
Chlorobenzene	120	U H	25	120
1,1,1,2-Tetrachloroethane	120	U H	25	120
Ethylbenzene	120	U H	25	120
m&p-Xylene	120	U H	46	120
o-Xylene	120	U H	26	120
Xylenes, Total	120	U H	26	120
Styrene	47	J H	21	120
Bromoform	120	U H	21	120
Isopropylbenzene	120	U H	24	120
Bromobenzene	120	U H	25	120
1,1,2,2-Tetrachloroethane	120	U H	22	120
1,2,3-Trichloropropane	120	U H	22	120
n-Propylbenzene	120	U H	25	120
2-Chlorotoluene	120	U H	27	120
4-Chlorotoluene	120	U H	27	120
1,3,5-Trimethylbenzene	120	U H	25	120
tert-Butylbenzene	120	U H	22	120
1,2,4-Trimethylbenzene	120	U H	22	120
sec-Butylbenzene	120	U H	24	120
1,3-Dichlorobenzene	120	U H	24	120
4-Isopropyltoluene	120	U H	24	120
1,4-Dichlorobenzene	120	U H	24	120
1,2-Dichlorobenzene	120	U H	25	120
n-Butylbenzene	120	U H	24	120
1,2-Dibromo-3-Chloropropane	120	U H	21	120
1,2,4-Trichlorobenzene	120	U H	25	120
Hexachlorobutadiene	120	U H	20	120
Naphthalene	120	U H	19	120
1,2,3-Trichlorobenzene	120	U H	24	120

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	97		80 - 120
Toluene-d8	95		80 - 120
Bromofluorobenzene	94		80 - 125
1,2-Dichlorobenzene-d4	86		75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B
Prep Method: 5035
Dilution: 1.0
Analysis Date: 12/28/2012 1400
Prep Date: 12/20/2012 0945

Analysis Batch: 200-50187
Prep Batch: 200-49812

Instrument ID: N.i
Lab File ID: nhma09.d
Initial Weight/Volume: 5.746 g
Final Weight/Volume: 5 mL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorodifluoromethane		5.0	U	0.35	5.0
Chloromethane		5.0	U	0.39	5.0
Vinyl chloride		5.0	U	0.30	5.0
Bromomethane		5.0	U	1.2	5.0
Chloroethane		5.0	U	0.39	5.0
Trichlorofluoromethane		5.0	U	0.27	5.0
1,1-Dichloroethene		5.0	U	0.39	5.0
Freon TF		5.0	U	0.31	5.0
Acetone		1200	E	2.1	5.0
Methyl iodide		5.0	U	0.65	5.0
Carbon disulfide		5.0	U	0.27	5.0
Methyl acetate		5.0	U	0.84	5.0
Methylene Chloride		5.0	U	0.40	5.0
trans-1,2-Dichloroethene		5.0	U	0.37	5.0
1,2-Dichloroethene, Total		5.0	U	0.35	5.0
Methyl t-butyl ether		5.0	U	0.41	5.0
1,1-Dichloroethane		5.0	U	0.34	5.0
Vinyl acetate		5.0	U	0.67	5.0
2,2-Dichloropropane		5.0	U	0.54	5.0
cis-1,2-Dichloroethene		5.0	U	0.35	5.0
2-Butanone		5.0	U	1.3	5.0
Bromochloromethane		5.0	U	0.33	5.0
Tetrahydrofuran		50	U	7.3	50
Chloroform		5.0	U	0.35	5.0
1,1,1-Trichloroethane		5.0	U	0.31	5.0
Cyclohexane		5.0	U	0.30	5.0
1,1-Dichloropropene		5.0	U	0.26	5.0
Carbon tetrachloride		5.0	U	0.29	5.0
Isobutyl alcohol		250	U	23	250
Benzene		5.0	U	0.32	5.0
1,2-Dichloroethane		5.0	U	0.39	5.0
Trichloroethene		5.0	U	0.36	5.0
Methylcyclohexane		5.0	U	0.26	5.0
1,2-Dichloropropane		5.0	U	0.33	5.0
Dibromomethane		5.0	U	0.34	5.0
1,4-Dioxane		250	U	15	250
Bromodichloromethane		5.0	U	0.36	5.0
2-Chloroethyl vinyl ether		5.0	U	0.23	5.0
cis-1,3-Dichloropropene		5.0	U	0.29	5.0
4-Methyl-2-pentanone		5.0	U	0.50	5.0
Toluene		5.0	U	0.11	5.0
trans-1,3-Dichloropropene		5.0	U	0.29	5.0
1,1,2-Trichloroethane		5.0	U	0.36	5.0
Tetrachloroethene		5.0	U	0.10	5.0
1,3-Dichloropropane		5.0	U	0.46	5.0
2-Hexanone		5.0	U	0.63	5.0

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-50187	Instrument ID:	N.i
Prep Method:	5035	Prep Batch:	200-49812	Lab File ID:	nhma09.d
Dilution:	1.0			Initial Weight/Volume:	5.746 g
Analysis Date:	12/28/2012 1400			Final Weight/Volume:	5 mL
Prep Date:	12/20/2012 0945				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dibromochloromethane		5.0	U	0.31	5.0
1,2-Dibromoethane		5.0	U	0.41	5.0
Chlorobenzene		5.0	U	0.16	5.0
1,1,1,2-Tetrachloroethane		5.0	U	0.060	5.0
Ethylbenzene		5.0	U	0.070	5.0
m&p-Xylene		5.0	U	0.25	5.0
o-Xylene		5.0	U	0.080	5.0
Xylenes, Total		5.0	U	0.080	5.0
Styrene		5.0	U	0.12	5.0
Bromoform		5.0	U	0.32	5.0
Isopropylbenzene		5.0	U	0.34	5.0
Bromobenzene		5.0	U	0.31	5.0
1,1,2,2-Tetrachloroethane		5.0	U	0.97	5.0
1,2,3-Trichloropropane		5.0	U	0.82	5.0
n-Propylbenzene		5.0	U	0.070	5.0
2-Chlorotoluene		5.0	U	0.35	5.0
4-Chlorotoluene		5.0	U	0.25	5.0
1,3,5-Trimethylbenzene		5.0	U	0.20	5.0
tert-Butylbenzene		5.0	U	0.26	5.0
1,2,4-Trimethylbenzene		5.0	U	0.050	5.0
sec-Butylbenzene		5.0	U	0.25	5.0
1,3-Dichlorobenzene		5.0	U	0.11	5.0
4-Isopropyltoluene		5.0	U	0.090	5.0
1,4-Dichlorobenzene		5.0	U	0.22	5.0
1,2-Dichlorobenzene		5.0	U	0.10	5.0
n-Butylbenzene		5.0	U	0.29	5.0
1,2-Dibromo-3-Chloropropane		5.0	U	0.96	5.0
1,2,4-Trichlorobenzene		0.42	J B	0.32	5.0
Hexachlorobutadiene		5.0	U	0.46	5.0
Naphthalene		0.80	J B	0.57	5.0
1,2,3-Trichlorobenzene		0.42	J B	0.37	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	94		35 - 145
Toluene-d8	100		40 - 175
Bromofluorobenzene	126		30 - 200
1,2-Dichlorobenzene-d4	94		20 - 185

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-01

Lab Sample ID: 200-14287-1
Client Matrix: Solid

% Moisture: 15.9

Date Sampled: 12/17/2012 1112
Date Received: 12/19/2012 1530

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Prep Method:	3550C	Prep Batch:	200-50113	Initial Weight/Volume:	29.83 g
Dilution:	3.0			Final Weight/Volume:	2000 uL
Analysis Date:	01/04/2013 1418			Injection Volume:	1 uL
Prep Date:	12/31/2012 0939			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10-C28]		120		3.6	24

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	88		40 - 125

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-02

Lab Sample ID: 200-14287-2
Client Matrix: Solid

% Moisture: 17.7

Date Sampled: 12/17/2012 1112
Date Received: 12/19/2012 1530

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Prep Method:	3550C	Prep Batch:	200-50113	Initial Weight/Volume:	30.00 g
Dilution:	5.0			Final Weight/Volume:	2000 uL
Analysis Date:	01/04/2013 1504			Injection Volume:	1 uL
Prep Date:	12/31/2012 0939			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel Range Organics [C10-C28]		170		6.1	41

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	102		40 - 125

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-03

Lab Sample ID: 200-14287-3
Client Matrix: Solid

% Moisture: 15.8

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Prep Method:	7471B	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0			Initial Weight/Volume:	0.33 g
Analysis Date:	12/28/2012 1249			Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Hg		0.063	B	0.0024	0.036

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-04

Lab Sample ID: 200-14287-4
Client Matrix: Solid

% Moisture: 13.3

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Prep Method:	7471B	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0			Initial Weight/Volume:	0.33 g
Analysis Date:	12/28/2012 1256			Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Hg		0.054	B	0.0023	0.035

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-05

Lab Sample ID: 200-14287-5
Client Matrix: Solid

% Moisture: 16.0

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	200-50092	Instrument ID:	METICP7
Prep Method:	3050B	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0			Initial Weight/Volume:	1.35 g
Analysis Date:	12/29/2012 0156			Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.54	J	0.43	5.3
Arsenic		2.5		0.49	0.88
Beryllium		0.38	J	0.028	0.44
Cadmium		0.45		0.069	0.44
Chromium		19.3		0.097	0.88
Copper		56.4		0.19	2.2
Lead		62.1		0.39	0.88
Nickel		20.1		0.26	3.5
Selenium		3.1	U	0.77	3.1
Silver		0.88	U	0.11	0.88
Thallium		2.2	U	0.36	2.2
Zinc		101		0.49	1.8

Client: Cardno ATC

Job Number: 200-14287-1

Client Sample ID: S-06

Lab Sample ID: 200-14287-6
Client Matrix: Solid

% Moisture: 14.5

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	200-50092	Instrument ID:	METICP7
Prep Method:	3050B	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0			Initial Weight/Volume:	1.90 g
Analysis Date:	12/29/2012 0211			Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.57	J	0.30	3.7
Arsenic		2.0		0.34	0.62
Beryllium		0.34		0.020	0.31
Cadmium		0.59		0.048	0.31
Chromium		18.3		0.068	0.62
Copper		53.1		0.14	1.5
Lead		82.6		0.27	0.62
Nickel		18.4		0.18	2.5
Selenium		2.2	U	0.54	2.2
Silver		0.62	U	0.080	0.62
Thallium		1.5	U	0.25	1.5
Zinc		127		0.34	1.2

Client: Cardno ATC

Job Number: 200-14287-1

General Chemistry

Client Sample ID: S-01

Lab Sample ID: 200-14287-1
Client Matrix: Solid

Date Sampled: 12/17/2012 1112
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.1		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-02

Lab Sample ID: 200-14287-2

Client Matrix: Solid

Date Sampled: 12/17/2012 1112

Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	82.3		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515

DryWt Corrected: N

General Chemistry

Client Sample ID: S-03

Lab Sample ID: 200-14287-3
Client Matrix: Solid

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.2		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-04

Lab Sample ID: 200-14287-4
Client Matrix: Solid

Date Sampled: 12/17/2012 1119
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	86.7		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-05

Lab Sample ID: 200-14287-5
Client Matrix: Solid

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.0		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515 DryWt Corrected: N

General Chemistry

Client Sample ID: S-06

Lab Sample ID: 200-14287-6
Client Matrix: Solid

Date Sampled: 12/17/2012 1126
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	85.5		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50231 Analysis Date: 01/03/2013 1515

DryWt Corrected: N

General Chemistry

Client Sample ID: **S-07**

Lab Sample ID: 200-14287-7
Client Matrix: Solid

Date Sampled: 12/18/2012 1100
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	84.2		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50565 Analysis Date: 01/11/2013 1433 DryWt Corrected: N

General Chemistry

Client Sample ID: S-08

Lab Sample ID: 200-14287-8
Client Matrix: Solid

Date Sampled: 12/18/2012 1101
Date Received: 12/19/2012 1530

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	86.7		%	0.25	0.25	1.0	Moisture

Analysis Batch: 200-50565 Analysis Date: 01/11/2013 1433

DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: Cardno ATC

Job Number: 200-14287-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
Metals		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 200-49811					
200-14287-7	S-07	T	Solid	5035	
200-14287-8	S-08	T	Solid	5035	
Prep Batch: 200-49812					
200-14287-8	S-08	T	Solid	5035	
Prep Batch: 200-50119					
LCS 200-50119/6-A	Lab Control Sample	T	Solid	5035	
LCS 200-50119/7-A	Lab Control Sample	T	Solid	5035	
MB 200-50119/1-A	Method Blank	T	Solid	5035	
MB 200-50119/2-A	Method Blank	T	Solid	5035	
Analysis Batch:200-50167					
LCS 200-50119/6-A	Lab Control Sample	T	Solid	8260B	200-50119
MB 200-50119/1-A	Method Blank	T	Solid	8260B	200-50119
200-14287-7	S-07	T	Solid	8260B	200-49811
Analysis Batch:200-50187					
LCS 200-50187/3	Lab Control Sample	T	Solid	8260B	
MB 200-50187/5	Method Blank	T	Solid	8260B	
200-14287-8	S-08	T	Solid	8260B	200-49812
Analysis Batch:200-50254					
LCS 200-50119/7-A	Lab Control Sample	T	Solid	8260B	200-50119
MB 200-50119/2-A	Method Blank	T	Solid	8260B	200-50119
200-14287-8	S-08	T	Solid	8260B	200-49811

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 200-50113					
LCS 200-50113/2-A	Lab Control Sample	T	Solid	3550C	
MB 200-50113/1-A	Method Blank	T	Solid	3550C	
200-14287-1	S-01	T	Solid	3550C	
200-14287-2	S-02	T	Solid	3550C	
Analysis Batch:200-50263					
LCS 200-50113/2-A	Lab Control Sample	T	Solid	8015B	200-50113
MB 200-50113/1-A	Method Blank	T	Solid	8015B	200-50113
200-14287-1	S-01	T	Solid	8015B	200-50113
200-14287-2	S-02	T	Solid	8015B	200-50113

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 200-50058					
LCS 200-50058/12-A	Lab Control Sample	T	Solid	7471B	
MB 200-50058/11-A	Method Blank	T	Solid	7471B	
200-14287-3	S-03	T	Solid	7471B	
200-14287-3DU	Duplicate	T	Solid	7471B	
200-14287-3MS	Matrix Spike	T	Solid	7471B	
200-14287-4	S-04	T	Solid	7471B	
Prep Batch: 200-50062					
LCS 200-50062/2-A	Lab Control Sample	T	Solid	3050B	
MB 200-50062/1-A	Method Blank	T	Solid	3050B	
200-14287-5	S-05	T	Solid	3050B	
200-14287-6	S-06	T	Solid	3050B	
Analysis Batch:200-50092					
LCS 200-50062/2-A	Lab Control Sample	T	Solid	6010C	200-50062
MB 200-50062/1-A	Method Blank	T	Solid	6010C	200-50062
200-14287-5	S-05	T	Solid	6010C	200-50062
200-14287-6	S-06	T	Solid	6010C	200-50062
Analysis Batch:200-50205					
LCS 200-50058/12-A	Lab Control Sample	T	Solid	7471B	200-50058
MB 200-50058/11-A	Method Blank	T	Solid	7471B	200-50058
200-14287-3	S-03	T	Solid	7471B	200-50058
200-14287-3DU	Duplicate	T	Solid	7471B	200-50058
200-14287-3MS	Matrix Spike	T	Solid	7471B	200-50058
200-14287-4	S-04	T	Solid	7471B	200-50058

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:200-50231					
200-14287-1	S-01	T	Solid	Moisture	
200-14287-2	S-02	T	Solid	Moisture	
200-14287-3	S-03	T	Solid	Moisture	
200-14287-4	S-04	T	Solid	Moisture	
200-14287-5	S-05	T	Solid	Moisture	
200-14287-6	S-06	T	Solid	Moisture	
Analysis Batch:200-50565					
200-14287-7	S-07	T	Solid	Moisture	
200-14287-8	S-08	T	Solid	Moisture	

Report Basis
T = Total

Client: Cardno ATC

Job Number: 200-14287-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DCZ %Rec
200-14287-8	S-08	94	100	126	94
MB 200-50187/5		94	94	96	95
LCS 200-50187/3		93	94	93	91

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4	35-145
TOL = Toluene-d8	40-175
BFB = Bromofluorobenzene	30-200
DCZ = 1,2-Dichlorobenzene-d4	20-185

Client: Cardno ATC

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DCZ %Rec
200-14287-7	S-07	94	96	92	89
200-14287-8	S-08	97	95	94	86
MB 200-50119/1-A		92	92	91	87
MB 200-50119/2-A		95	94	94	87
LCS 200-50119/6-A		93	95	90	86
LCS 200-50119/7-A		94	96	95	88

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4	80-120
TOL = Toluene-d8	80-120
BFB = Bromofluorobenzene	80-125
DCZ = 1,2-Dichlorobenzene-d4	75-120

Client: Cardno ATC

Job Number: 200-14287-1

Surrogate Recovery Report

8015B Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec
200-14287-1	S-01	88
200-14287-2	S-02	102
MB 200-50113/1-A		86
LCS 200-50113/2-A		91

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	40-125

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/1-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1300	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorodifluoromethane	100	U	21	100
Chloromethane	100	U	26	100
Vinyl chloride	100	U	20	100
Bromomethane	100	U	25	100
Chloroethane	100	U	15	100
Trichlorofluoromethane	100	U	13	100
1,1-Dichloroethene	100	U	22	100
Freon TF	100	U	18	100
Acetone	500	U	89	500
Methyl iodide	100	U	7.4	100
Carbon disulfide	100	U	16	100
Methyl acetate	100	U	21	100
Methylene Chloride	100	U	27	100
trans-1,2-Dichloroethene	100	U	20	100
1,2-Dichloroethene, Total	100	U	18	100
Methyl t-butyl ether	100	U	18	100
1,1-Dichloroethane	100	U	20	100
Vinyl acetate	100	U	44	100
2,2-Dichloropropane	100	U	22	100
cis-1,2-Dichloroethene	100	U	18	100
2-Butanone	500	U	86	500
Bromochloromethane	100	U	19	100
Tetrahydrofuran	1400	U	220	1400
Chloroform	100	U	19	100
1,1,1-Trichloroethane	100	U	20	100
Cyclohexane	100	U	20	100
1,1-Dichloropropene	100	U	20	100
Carbon tetrachloride	100	U	15	100
Isobutyl alcohol	5000	U	930	5000
Benzene	100	U	21	100
1,2-Dichloroethane	100	U	17	100
Trichloroethene	100	U	17	100
Methylcyclohexane	100	U	18	100
1,2-Dichloropropane	100	U	19	100
Dibromomethane	100	U	19	100
1,4-Dioxane	5000	U	1100	5000
Bromodichloromethane	100	U	19	100
2-Chloroethyl vinyl ether	100	U	17	100
cis-1,3-Dichloropropene	100	U	18	100
4-Methyl-2-pentanone	500	U	110	500
Toluene	100	U	20	100
trans-1,3-Dichloropropene	100	U	17	100
1,1,2-Trichloroethane	100	U	19	100
Tetrachloroethene	100	U	20	100
1,3-Dichloropropane	100	U	16	100

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/1-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1300	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Hexanone	500	U	77	500
Dibromochloromethane	100	U	16	100
1,2-Dibromoethane	100	U	19	100
Chlorobenzene	100	U	20	100
1,1,1,2-Tetrachloroethane	100	U	20	100
Ethylbenzene	100	U	20	100
m&p-Xylene	100	U	37	100
o-Xylene	100	U	21	100
Xylenes, Total	100	U	21	100
Styrene	100	U	17	100
Bromoform	100	U	17	100
Isopropylbenzene	100	U	19	100
Bromobenzene	100	U	20	100
1,1,2,2-Tetrachloroethane	100	U	18	100
1,2,3-Trichloropropane	100	U	18	100
n-Propylbenzene	100	U	20	100
2-Chlorotoluene	100	U	22	100
4-Chlorotoluene	100	U	22	100
1,3,5-Trimethylbenzene	100	U	20	100
tert-Butylbenzene	100	U	18	100
1,2,4-Trimethylbenzene	100	U	18	100
sec-Butylbenzene	100	U	19	100
1,3-Dichlorobenzene	100	U	19	100
4-Isopropyltoluene	100	U	19	100
1,4-Dichlorobenzene	100	U	19	100
1,2-Dichlorobenzene	100	U	20	100
n-Butylbenzene	100	U	19	100
1,2-Dibromo-3-Chloropropane	100	U	17	100
1,2,4-Trichlorobenzene	100	U	20	100
Hexachlorobutadiene	100	U	16	100
Naphthalene	100	U	15	100
1,2,3-Trichlorobenzene	100	U	19	100

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	92	80 - 120
Toluene-d8	92	80 - 120
Bromofluorobenzene	91	80 - 125
1,2-Dichlorobenzene-d4	87	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/2-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/03/2013 0023	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorodifluoromethane	100	U	21	100
Chloromethane	100	U	26	100
Vinyl chloride	100	U	20	100
Bromomethane	100	U	25	100
Chloroethane	100	U	15	100
Trichlorofluoromethane	100	U	13	100
1,1-Dichloroethene	100	U	22	100
Freon TF	100	U	18	100
Acetone	500	U	89	500
Methyl iodide	100	U	7.4	100
Carbon disulfide	100	U	16	100
Methyl acetate	100	U	21	100
Methylene Chloride	100	U	27	100
trans-1,2-Dichloroethene	100	U	20	100
1,2-Dichloroethene, Total	100	U	18	100
Methyl t-butyl ether	100	U	18	100
1,1-Dichloroethane	100	U	20	100
Vinyl acetate	100	U	44	100
2,2-Dichloropropane	100	U	22	100
cis-1,2-Dichloroethene	100	U	18	100
2-Butanone	500	U	86	500
Bromochloromethane	100	U	19	100
Tetrahydrofuran	1400	U	220	1400
Chloroform	100	U	19	100
1,1,1-Trichloroethane	100	U	20	100
Cyclohexane	100	U	20	100
1,1-Dichloropropene	100	U	20	100
Carbon tetrachloride	100	U	15	100
Isobutyl alcohol	5000	U	930	5000
Benzene	100	U	21	100
1,2-Dichloroethane	100	U	17	100
Trichloroethene	100	U	17	100
Methylcyclohexane	100	U	18	100
1,2-Dichloropropane	100	U	19	100
Dibromomethane	100	U	19	100
1,4-Dioxane	5000	U	1100	5000
Bromodichloromethane	100	U	19	100
2-Chloroethyl vinyl ether	100	U	17	100
cis-1,3-Dichloropropene	100	U	18	100
4-Methyl-2-pentanone	500	U	110	500
Toluene	100	U	20	100
trans-1,3-Dichloropropene	100	U	17	100
1,1,2-Trichloroethane	100	U	19	100
Tetrachloroethene	100	U	20	100
1,3-Dichloropropane	100	U	16	100

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 200-50119/2-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf07.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/03/2013 0023	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Hexanone	500	U	77	500
Dibromochloromethane	100	U	16	100
1,2-Dibromoethane	100	U	19	100
Chlorobenzene	100	U	20	100
1,1,1,2-Tetrachloroethane	100	U	20	100
Ethylbenzene	100	U	20	100
m&p-Xylene	100	U	37	100
o-Xylene	100	U	21	100
Xylenes, Total	100	U	21	100
Styrene	100	U	17	100
Bromoform	100	U	17	100
Isopropylbenzene	100	U	19	100
Bromobenzene	100	U	20	100
1,1,2,2-Tetrachloroethane	100	U	18	100
1,2,3-Trichloropropane	100	U	18	100
n-Propylbenzene	100	U	20	100
2-Chlorotoluene	100	U	22	100
4-Chlorotoluene	100	U	22	100
1,3,5-Trimethylbenzene	100	U	20	100
tert-Butylbenzene	100	U	18	100
1,2,4-Trimethylbenzene	100	U	18	100
sec-Butylbenzene	100	U	19	100
1,3-Dichlorobenzene	100	U	19	100
4-Isopropyltoluene	100	U	19	100
1,4-Dichlorobenzene	100	U	19	100
1,2-Dichlorobenzene	100	U	20	100
n-Butylbenzene	100	U	19	100
1,2-Dibromo-3-Chloropropane	100	U	17	100
1,2,4-Trichlorobenzene	100	U	20	100
Hexachlorobutadiene	100	U	16	100
Naphthalene	100	U	15	100
1,2,3-Trichlorobenzene	100	U	19	100

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	95	80 - 120
Toluene-d8	94	80 - 120
Bromofluorobenzene	94	80 - 125
1,2-Dichlorobenzene-d4	87	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/6-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1123	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	2500	1840	74	35 - 125	
Chloromethane	2500	1900	76	65 - 120	
Vinyl chloride	2500	2370	95	80 - 130	
Bromomethane	2500	1320	53	40 - 120	
Chloroethane	2500	1140	46	40 - 120	
Trichlorofluoromethane	2500	1510	60	40 - 120	
1,1-Dichloroethene	2500	2760	110	80 - 120	
Freon TF	2500	2370	95	70 - 120	
Acetone	12500	14900	119	15 - 200	
Methyl iodide	2500	2230	89	45 - 150	
Carbon disulfide	2500	2370	95	80 - 120	
Methyl acetate	2500	2060	83	70 - 120	
Methylene Chloride	2500	2560	102	80 - 120	
trans-1,2-Dichloroethene	2500	2620	105	80 - 125	
Methyl t-butyl ether	2500	2490	100	80 - 120	
1,1-Dichloroethane	2500	2570	103	80 - 120	
Vinyl acetate	2500	3080	123	80 - 200	
2,2-Dichloropropane	2500	2650	106	80 - 120	
cis-1,2-Dichloroethene	2500	2510	100	80 - 125	
2-Butanone	12500	14500	116	60 - 170	
Bromochloromethane	2500	2230	89	80 - 130	
Tetrahydrofuran	35000	35800	102	80 - 120	
Chloroform	2500	2460	98	75 - 120	
1,1,1-Trichloroethane	2500	2570	103	75 - 120	
Cyclohexane	2500	2650	106	80 - 120	
1,1-Dichloropropene	2500	2590	104	80 - 125	
Carbon tetrachloride	2500	2550	102	75 - 120	
Isobutyl alcohol	125000	123000	99	80 - 130	
Benzene	2500	2480	99	80 - 125	
1,2-Dichloroethane	2500	2450	98	70 - 120	
Trichloroethene	2500	2410	96	75 - 120	
Methylcyclohexane	2500	2630	105	80 - 120	
1,2-Dichloropropane	2500	2420	97	80 - 125	
Dibromomethane	2500	2370	95	75 - 120	
1,4-Dioxane	125000	142000	113	75 - 140	
Bromodichloromethane	2500	2350	94	80 - 120	
2-Chloroethyl vinyl ether	2500	2330	93	80 - 125	
cis-1,3-Dichloropropene	2500	2520	101	80 - 125	
4-Methyl-2-pentanone	12500	12100	97	80 - 125	
Toluene	2500	2480	99	80 - 120	
trans-1,3-Dichloropropene	2500	2420	97	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/6-A	Analysis Batch:	200-50167	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilc04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/31/2012 1123	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,2-Trichloroethane	2500	2270	91	80 - 125	
Tetrachloroethene	2500	2500	100	80 - 120	
1,3-Dichloropropane	2500	2370	95	80 - 125	
2-Hexanone	12500	13800	110	75 - 150	
Dibromochloromethane	2500	2440	98	80 - 125	
1,2-Dibromoethane	2500	2420	97	80 - 120	
Chlorobenzene	2500	2380	95	80 - 120	
1,1,1,2-Tetrachloroethane	2500	2370	95	80 - 120	
Ethylbenzene	2500	2400	96	80 - 125	
m&p-Xylene	5000	4840	97	80 - 125	
o-Xylene	2500	2410	96	80 - 120	
Styrene	2500	2450	98	80 - 120	
Bromoform	2500	2370	95	80 - 120	
Isopropylbenzene	2500	2390	96	80 - 120	
Bromobenzene	2500	2360	94	80 - 125	
1,1,2,2-Tetrachloroethane	2500	2390	96	80 - 125	
1,2,3-Trichloropropane	2500	2290	92	80 - 120	
n-Propylbenzene	2500	2340	94	80 - 120	
2-Chlorotoluene	2500	2360	94	80 - 125	
4-Chlorotoluene	2500	2360	95	80 - 125	
1,3,5-Trimethylbenzene	2500	2390	95	80 - 120	
tert-Butylbenzene	2500	2360	94	75 - 120	
1,2,4-Trimethylbenzene	2500	2370	95	80 - 120	
sec-Butylbenzene	2500	2410	96	80 - 120	
1,3-Dichlorobenzene	2500	2370	95	80 - 125	
4-Isopropyltoluene	2500	2320	93	75 - 120	
1,4-Dichlorobenzene	2500	2360	94	80 - 125	
1,2-Dichlorobenzene	2500	2340	94	80 - 125	
n-Butylbenzene	2500	2420	97	80 - 120	
1,2-Dibromo-3-Chloropropane	2500	2190	88	70 - 120	
1,2,4-Trichlorobenzene	2500	2300	92	80 - 120	
Hexachlorobutadiene	2500	2510	100	75 - 120	
Naphthalene	2500	2290	92	80 - 130	
1,2,3-Trichlorobenzene	2500	2340	94	80 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	93	80 - 120
Toluene-d8	95	80 - 120
Bromofluorobenzene	90	80 - 125
1,2-Dichlorobenzene-d4	86	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/7-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/02/2013 2248	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	2500	1680	67	35 - 125	
Chloromethane	2500	1900	76	65 - 120	
Vinyl chloride	2500	2330	93	80 - 130	
Bromomethane	2500	1380	55	40 - 120	
Chloroethane	2500	1120	45	40 - 120	
Trichlorofluoromethane	2500	1530	61	40 - 120	
1,1-Dichloroethene	2500	2720	109	80 - 120	
Freon TF	2500	2350	94	70 - 120	
Acetone	12500	14300	115	15 - 200	
Methyl iodide	2500	2550	102	45 - 150	
Carbon disulfide	2500	2450	98	80 - 120	
Methyl acetate	2500	2170	87	70 - 120	
Methylene Chloride	2500	2560	102	80 - 120	
trans-1,2-Dichloroethene	2500	2630	105	80 - 125	
Methyl t-butyl ether	2500	2470	99	80 - 120	
1,1-Dichloroethane	2500	2600	104	80 - 120	
Vinyl acetate	2500	3040	122	80 - 200	
2,2-Dichloropropane	2500	2640	106	80 - 120	
cis-1,2-Dichloroethene	2500	2480	99	80 - 125	
2-Butanone	12500	13900	111	60 - 170	
Bromochloromethane	2500	2280	91	80 - 130	
Tetrahydrofuran	35000	34500	98	80 - 120	
Chloroform	2500	2460	99	75 - 120	
1,1,1-Trichloroethane	2500	2560	102	75 - 120	
Cyclohexane	2500	2630	105	80 - 120	
1,1-Dichloropropene	2500	2610	104	80 - 125	
Carbon tetrachloride	2500	2530	101	75 - 120	
Isobutyl alcohol	125000	113000	90	80 - 130	
Benzene	2500	2490	100	80 - 125	
1,2-Dichloroethane	2500	2470	99	70 - 120	
Trichloroethene	2500	2410	96	75 - 120	
Methylcyclohexane	2500	2600	104	80 - 120	
1,2-Dichloropropane	2500	2400	96	80 - 125	
Dibromomethane	2500	2330	93	75 - 120	
1,4-Dioxane	125000	125000	100	75 - 140	
Bromodichloromethane	2500	2340	94	80 - 120	
2-Chloroethyl vinyl ether	2500	2310	92	80 - 125	
cis-1,3-Dichloropropene	2500	2490	100	80 - 125	
4-Methyl-2-pentanone	12500	11600	93	80 - 125	
Toluene	2500	2490	99	80 - 120	
trans-1,3-Dichloropropene	2500	2410	96	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50119

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 200-50119/7-A	Analysis Batch:	200-50254	Instrument ID:	L.i
Client Matrix:	Solid	Prep Batch:	200-50119	Lab File ID:	lilf04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	01/02/2013 2248	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	12/31/2012 1051				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,2-Trichloroethane	2500	2270	91	80 - 125	
Tetrachloroethene	2500	2460	98	80 - 120	
1,3-Dichloropropane	2500	2350	94	80 - 125	
2-Hexanone	12500	13100	105	75 - 150	
Dibromochloromethane	2500	2410	96	80 - 125	
1,2-Dibromoethane	2500	2370	95	80 - 120	
Chlorobenzene	2500	2380	95	80 - 120	
1,1,1,2-Tetrachloroethane	2500	2350	94	80 - 120	
Ethylbenzene	2500	2400	96	80 - 125	
m&p-Xylene	5000	4840	97	80 - 125	
o-Xylene	2500	2380	95	80 - 120	
Styrene	2500	2420	97	80 - 120	
Bromoform	2500	2270	91	80 - 120	
Isopropylbenzene	2500	2470	99	80 - 120	
Bromobenzene	2500	2430	97	80 - 125	
1,1,2,2-Tetrachloroethane	2500	2400	96	80 - 125	
1,2,3-Trichloropropane	2500	2320	93	80 - 120	
n-Propylbenzene	2500	2400	96	80 - 120	
2-Chlorotoluene	2500	2440	97	80 - 125	
4-Chlorotoluene	2500	2440	98	80 - 125	
1,3,5-Trimethylbenzene	2500	2480	99	80 - 120	
tert-Butylbenzene	2500	2450	98	75 - 120	
1,2,4-Trimethylbenzene	2500	2450	98	80 - 120	
sec-Butylbenzene	2500	2490	100	80 - 120	
1,3-Dichlorobenzene	2500	2400	96	80 - 125	
4-Isopropyltoluene	2500	2380	95	75 - 120	
1,4-Dichlorobenzene	2500	2400	96	80 - 125	
1,2-Dichlorobenzene	2500	2400	96	80 - 125	
n-Butylbenzene	2500	2480	99	80 - 120	
1,2-Dibromo-3-Chloropropane	2500	2190	87	70 - 120	
1,2,4-Trichlorobenzene	2500	2280	91	80 - 120	
Hexachlorobutadiene	2500	2450	98	75 - 120	
Naphthalene	2500	2210	88	80 - 130	
1,2,3-Trichlorobenzene	2500	2270	91	80 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	94	80 - 120
Toluene-d8	96	80 - 120
Bromofluorobenzene	95	80 - 125
1,2-Dichlorobenzene-d4	88	75 - 120

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	MB 200-50187/5	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma05.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1159	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dichlorodifluoromethane	5.0	U	0.35	5.0
Chloromethane	5.0	U	0.39	5.0
Vinyl chloride	5.0	U	0.30	5.0
Bromomethane	5.0	U	1.2	5.0
Chloroethane	5.0	U	0.39	5.0
Trichlorofluoromethane	5.0	U	0.27	5.0
1,1-Dichloroethene	5.0	U	0.39	5.0
Freon TF	5.0	U	0.31	5.0
Acetone	5.0	U	2.1	5.0
Methyl iodide	5.0	U	0.65	5.0
Carbon disulfide	5.0	U	0.27	5.0
Methyl acetate	5.0	U	0.84	5.0
Methylene Chloride	5.0	U	0.40	5.0
trans-1,2-Dichloroethene	5.0	U	0.37	5.0
1,2-Dichloroethene, Total	5.0	U	0.35	5.0
Methyl t-butyl ether	5.0	U	0.41	5.0
1,1-Dichloroethane	5.0	U	0.34	5.0
Vinyl acetate	5.0	U	0.67	5.0
2,2-Dichloropropane	5.0	U	0.54	5.0
cis-1,2-Dichloroethene	5.0	U	0.35	5.0
2-Butanone	5.0	U	1.3	5.0
Bromochloromethane	5.0	U	0.33	5.0
Tetrahydrofuran	50	U	7.3	50
Chloroform	5.0	U	0.35	5.0
1,1,1-Trichloroethane	5.0	U	0.31	5.0
Cyclohexane	5.0	U	0.30	5.0
1,1-Dichloropropene	5.0	U	0.26	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Isobutyl alcohol	250	U	23	250
Benzene	5.0	U	0.32	5.0
1,2-Dichloroethane	5.0	U	0.39	5.0
Trichloroethene	5.0	U	0.36	5.0
Methylcyclohexane	5.0	U	0.26	5.0
1,2-Dichloropropane	5.0	U	0.33	5.0
Dibromomethane	5.0	U	0.34	5.0
1,4-Dioxane	250	U	15	250
Bromodichloromethane	5.0	U	0.36	5.0
2-Chloroethyl vinyl ether	5.0	U	0.23	5.0
cis-1,3-Dichloropropene	5.0	U	0.29	5.0
4-Methyl-2-pentanone	5.0	U	0.50	5.0
Toluene	5.0	U	0.11	5.0
trans-1,3-Dichloropropene	5.0	U	0.29	5.0
1,1,2-Trichloroethane	5.0	U	0.36	5.0
Tetrachloroethene	5.0	U	0.10	5.0
1,3-Dichloropropane	5.0	U	0.46	5.0

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	MB 200-50187/5	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma05.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1159	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Hexanone	5.0	U	0.63	5.0
Dibromochloromethane	5.0	U	0.31	5.0
1,2-Dibromoethane	5.0	U	0.41	5.0
Chlorobenzene	5.0	U	0.16	5.0
1,1,1,2-Tetrachloroethane	5.0	U	0.060	5.0
Ethylbenzene	5.0	U	0.070	5.0
m&p-Xylene	5.0	U	0.25	5.0
o-Xylene	5.0	U	0.080	5.0
Xylenes, Total	5.0	U	0.080	5.0
Styrene	5.0	U	0.12	5.0
Bromoform	5.0	U	0.32	5.0
Isopropylbenzene	5.0	U	0.34	5.0
Bromobenzene	5.0	U	0.31	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.97	5.0
1,2,3-Trichloropropane	5.0	U	0.82	5.0
n-Propylbenzene	5.0	U	0.070	5.0
2-Chlorotoluene	5.0	U	0.35	5.0
4-Chlorotoluene	5.0	U	0.25	5.0
1,3,5-Trimethylbenzene	5.0	U	0.20	5.0
tert-Butylbenzene	5.0	U	0.26	5.0
1,2,4-Trimethylbenzene	5.0	U	0.050	5.0
sec-Butylbenzene	5.0	U	0.25	5.0
1,3-Dichlorobenzene	0.158	J	0.11	5.0
4-Isopropyltoluene	5.0	U	0.090	5.0
1,4-Dichlorobenzene	5.0	U	0.22	5.0
1,2-Dichlorobenzene	5.0	U	0.10	5.0
n-Butylbenzene	5.0	U	0.29	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	0.96	5.0
1,2,4-Trichlorobenzene	0.417	J	0.32	5.0
Hexachlorobutadiene	5.0	U	0.46	5.0
Naphthalene	0.639	J	0.57	5.0
1,2,3-Trichlorobenzene	0.471	J	0.37	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	94	35 - 145
Toluene-d8	94	40 - 175
Bromofluorobenzene	96	30 - 200
1,2-Dichlorobenzene-d4	95	20 - 185

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	LCS 200-50187/3	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma03.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1059	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	50.0	38.1	76	55 - 120	
Chloromethane	50.0	39.0	78	65 - 120	
Vinyl chloride	50.0	46.3	93	75 - 120	
Bromomethane	50.0	34.2	68	60 - 120	
Chloroethane	50.0	42.4	85	75 - 120	
Trichlorofluoromethane	50.0	42.3	85	65 - 120	
1,1-Dichloroethene	50.0	48.8	98	80 - 120	
Freon TF	50.0	44.2	88	65 - 120	
Acetone	125	104	83	70 - 120	
Methyl iodide	50.0	45.4	91	55 - 125	
Carbon disulfide	50.0	45.6	91	65 - 120	
Methyl acetate	50.0	37.4	75	65 - 120	
Methylene Chloride	50.0	48.4	97	75 - 120	
trans-1,2-Dichloroethene	50.0	49.3	99	75 - 125	
Methyl t-butyl ether	50.0	47.8	96	70 - 120	
1,1-Dichloroethane	50.0	47.1	94	70 - 120	
Vinyl acetate	50.0	87.6	175	80 - 185	
2,2-Dichloropropane	50.0	46.9	94	75 - 120	
cis-1,2-Dichloroethene	50.0	48.6	97	75 - 120	
2-Butanone	125	119	95	60 - 130	
Bromochloromethane	50.0	47.1	94	75 - 120	
Tetrahydrofuran	575	575	100	75 - 120	
Chloroform	50.0	47.5	95	80 - 120	
1,1,1-Trichloroethane	50.0	46.7	93	70 - 120	
Cyclohexane	50.0	50.9	102	70 - 120	
1,1-Dichloropropene	50.0	49.0	98	75 - 120	
Carbon tetrachloride	50.0	46.2	92	70 - 120	
Isobutyl alcohol	2500	2660	107	75 - 130	
Benzene	50.0	49.0	98	75 - 125	
1,2-Dichloroethane	50.0	45.5	91	70 - 120	
Trichloroethene	50.0	47.3	95	75 - 120	
Methylcyclohexane	50.0	50.5	101	75 - 120	
1,2-Dichloropropane	50.0	47.2	94	75 - 120	
Dibromomethane	50.0	47.7	95	75 - 120	
1,4-Dioxane	2500	2730	109	75 - 120	
Bromodichloromethane	50.0	46.6	93	75 - 120	
2-Chloroethyl vinyl ether	50.0	41.5	83	55 - 120	
cis-1,3-Dichloropropene	50.0	51.7	103	80 - 120	
4-Methyl-2-pentanone	125	122	97	75 - 130	
Toluene	50.0	48.6	97	80 - 125	
trans-1,3-Dichloropropene	50.0	48.7	97	75 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Lab Control Sample - Batch: 200-50187

Method: 8260B
Preparation: N/A

Lab Sample ID:	LCS 200-50187/3	Analysis Batch:	200-50187	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	nhma03.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	12/28/2012 1059	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,2-Trichloroethane	50.0	47.3	95	75 - 120	
Tetrachloroethene	50.0	48.4	97	80 - 125	
1,3-Dichloropropane	50.0	48.4	97	75 - 120	
2-Hexanone	125	123	98	80 - 120	
Dibromochloromethane	50.0	48.4	97	75 - 120	
1,2-Dibromoethane	50.0	49.5	99	75 - 120	
Chlorobenzene	50.0	49.1	98	80 - 125	
1,1,1,2-Tetrachloroethane	50.0	46.8	94	75 - 120	
Ethylbenzene	50.0	49.0	98	80 - 125	
m&p-Xylene	100	97.4	97	80 - 125	
o-Xylene	50.0	48.3	97	80 - 125	
Styrene	50.0	49.1	98	80 - 125	
Bromoform	50.0	47.6	95	75 - 120	
Isopropylbenzene	50.0	46.8	94	80 - 125	
Bromobenzene	50.0	47.1	94	75 - 120	
1,1,2,2-Tetrachloroethane	50.0	47.2	94	75 - 120	
1,2,3-Trichloropropane	50.0	45.9	92	70 - 120	
n-Propylbenzene	50.0	46.6	93	80 - 125	
2-Chlorotoluene	50.0	46.8	94	80 - 125	
4-Chlorotoluene	50.0	48.1	96	80 - 125	
1,3,5-Trimethylbenzene	50.0	47.4	95	80 - 125	
tert-Butylbenzene	50.0	46.3	93	75 - 120	
1,2,4-Trimethylbenzene	50.0	47.2	94	80 - 125	
sec-Butylbenzene	50.0	47.8	96	80 - 125	
1,3-Dichlorobenzene	50.0	47.7	95	80 - 125	
4-Isopropyltoluene	50.0	46.4	93	75 - 120	
1,4-Dichlorobenzene	50.0	48.4	97	80 - 120	
1,2-Dichlorobenzene	50.0	47.6	95	80 - 125	
n-Butylbenzene	50.0	49.6	99	80 - 125	
1,2-Dibromo-3-Chloropropane	50.0	44.9	90	70 - 120	
1,2,4-Trichlorobenzene	50.0	49.8	100	80 - 125	
Hexachlorobutadiene	50.0	51.3	103	80 - 130	
Naphthalene	50.0	49.3	99	80 - 120	
1,2,3-Trichlorobenzene	50.0	50.1	100	80 - 125	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4	93	35 - 145
Toluene-d8	94	40 - 175
Bromofluorobenzene	93	30 - 200
1,2-Dichlorobenzene-d4	91	20 - 185

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50113

Method: 8015B
Preparation: 3550C

Lab Sample ID:	MB 200-50113/1-A	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Client Matrix:	Solid	Prep Batch:	200-50113	Lab File ID:	F0010403.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.52 g
Analysis Date:	01/04/2013 1247	Units:	mg/Kg	Final Weight/Volume:	2000 uL
Prep Date:	12/31/2012 0939			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Diesel Range Organics [C10-C28]	6.6	U	0.98	6.6

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	86	40 - 125

Lab Control Sample - Batch: 200-50113

Method: 8015B
Preparation: 3550C

Lab Sample ID:	LCS 200-50113/2-A	Analysis Batch:	200-50263	Instrument ID:	GC1031-F
Client Matrix:	Solid	Prep Batch:	200-50113	Lab File ID:	F0010404.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.29 g
Analysis Date:	01/04/2013 1332	Units:	mg/Kg	Final Weight/Volume:	2000 uL
Prep Date:	12/31/2012 0939			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diesel Range Organics [C10-C28]	33.0	30.2	91	35 - 160	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	91	40 - 125

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50062

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 200-50062/1-A	Analysis Batch:	200-50092	Instrument ID:	METICP7
Client Matrix:	Solid	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/29/2012 0146	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	6.0	U	0.49	6.0
Arsenic	1.0	U	0.56	1.0
Beryllium	0.50	U	0.032	0.50
Cadmium	0.50	U	0.078	0.50
Chromium	1.0	U	0.11	1.0
Copper	2.5	U	0.22	2.5
Lead	1.0	U	0.44	1.0
Nickel	4.0	U	0.29	4.0
Selenium	3.5	U	0.87	3.5
Silver	1.0	U	0.13	1.0
Thallium	2.5	U	0.41	2.5
Zinc	2.0	U	0.56	2.0

Lab Control Sample - Batch: 200-50062

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCS 200-50062/2-A	Analysis Batch:	200-50092	Instrument ID:	METICP7
Client Matrix:	Solid	Prep Batch:	200-50062	Lab File ID:	122912-01.ttx
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	12/29/2012 0151	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/28/2012 0900				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	49.19	98	80 - 120	
Arsenic	24.0	22.81	95	80 - 120	
Beryllium	5.00	4.83	97	80 - 120	
Cadmium	25.0	22.14	89	80 - 120	
Chromium	20.0	19.06	95	80 - 120	
Copper	25.0	23.21	93	80 - 120	
Lead	22.0	20.10	91	80 - 120	
Nickel	50.0	45.69	91	80 - 120	
Selenium	25.0	22.82	91	80 - 120	
Silver	25.0	25.48	102	80 - 120	
Thallium	25.0	22.56	90	80 - 120	
Zinc	50.0	45.87	92	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Method Blank - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 200-50058/11-A	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.30 g
Analysis Date:	12/28/2012 1245	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Hg	0.00450	J	0.0022	0.033

Lab Control Sample - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCS 200-50058/12-A	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.30 g
Analysis Date:	12/28/2012 1247	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hg	0.167	0.160	96	80 - 120	

Matrix Spike - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	200-14287-3	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.33 g
Analysis Date:	12/28/2012 1254	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Hg	0.063	0.180	0.221	88	80 - 120	

Client: Cardno ATC

Job Number: 200-14287-1

Duplicate - Batch: 200-50058

Method: 7471B
Preparation: 7471B

Lab Sample ID:	200-14287-3	Analysis Batch:	200-50205	Instrument ID:	MEPCV3 II
Client Matrix:	Solid	Prep Batch:	200-50058	Lab File ID:	122812AA.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.36 g
Analysis Date:	12/28/2012 1252	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/26/2012 1600				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Hg	0.063	0.0696	9	20	

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

FAL (copy)

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: Sara F	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone: 802 862 1980	E-Mail:		Page:
Company: CARDNO ATC				Job #:
Address: 171 Commerce St	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495				
Phone: 802 862 1980	PO #:			
Email: Harland.Miller@Cardno.com	WO #:			
Project Name: St. J Armory	Project #: 63.35078.0013			
Site: St. Johnsbury VT	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TPH - 8015B	Mercury - 7471B	Full Scan Metals - 6010C	VOC - 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
Pit Dram 1 - TPH	12/17/12	1112	G	S			X					S-01
Pit Dram 2 - TPH	12/17/12	1112	G	S			X					S-02
Pit Dram 1 - Mercury	12/17/12	1119	G	S				X				S-03
Pit Dram 2 - Mercury	12/17/12	1119	G	S				X				S-04
Pit Dram 1 - Metals	12/17/12	1126	G	S					X			S-05
Pit Dram 2 - Metals	12/17/12	1126	G	S					X			S-06
Pit Dram 1 - VOCs	12/18/12	1100	G	S						X		~~S-07~~ S-07
Pit Dram 2 - VOCs	12/17/12	1101	G	S						X		S-08

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time: 12/19/12 1	Company: Cardno	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

02/05/2013

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D.P.	Lab PM: Sara G	Carrier Tracking No(s):	COC No:
Client Contact: Harland Miller	Phone: 802 862 1980	E-Mail:		Page:
Company: CARDNO ATC				Job #:
Address: 171 Commerce St	Due Date Requested:			
City: Williston	TAT Requested (days): Standard			
State, Zip: VT 05495	PO #:			
Phone: 802 862 1980	WO #:			
Email: Harland.Miller@Cardno.com	Project #: 63.35078-0013			
Project Name: St. J Armory	SSOW#:			
Site: St. Johnsbury VT				

Analysis Requested

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TPH - 8015B	Mercury - 7471B	Full Scan Metals - 6010C	VOC - 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
Pit Drum 1 - TPH	12/17/12	1112	G	S			X					See attached
Pit Drum 2 - TPH	12/17/12	1112	G	S			X					
Pit Drum 1 - Mercury	12/17/12	1119	G	S				X				
Pit Drum 2 - Mercury	12/17/12	1119	G	S				X				
Pit Drum 1 - Metals	12/17/12	1126	G	S					X			
Pit Drum 2 - Metals	12/17/12	1126	G	S					X			
Pit Drum 1 - VOCs	12/18/12	1100	G	S						X		
Pit Drum 2 - VOCs	12/18/12	1101	G	S						X		

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Relinquished by:	Date/Time: 12/19/12 1	Company: Cardno	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

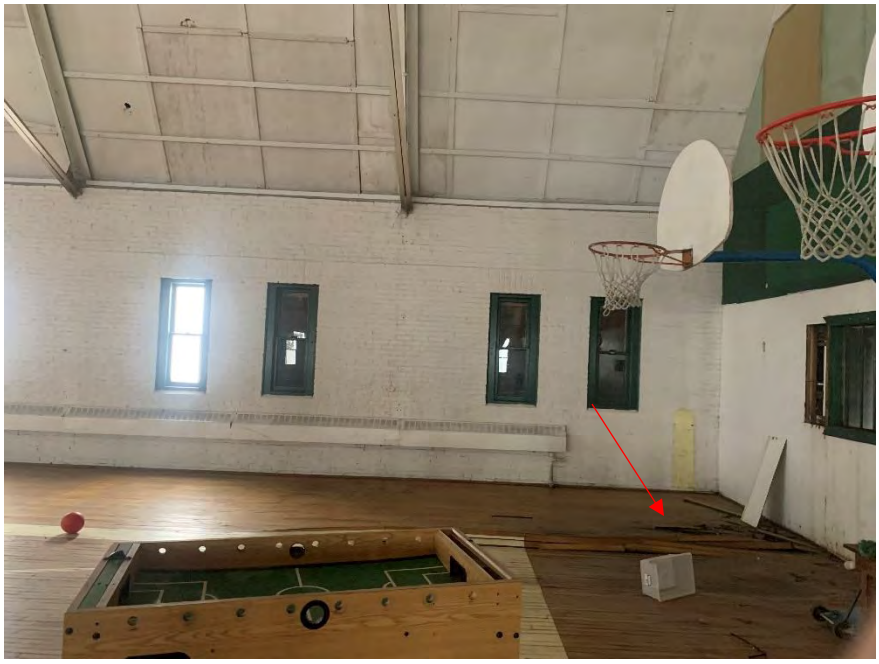
Cooler Temperature(s) °C and Other Remarks:

Page 56 of 57

3/6/2013

APPENDIX B

Appendix B
Hazardous Building Material Inspection
Former St. Johnsbury Armory
St. Johnsbury, VT



Date: 2/3/21	**Location:** Gym
Description: PCBs black flooring paper under hardwood	



Date: 2/3/21	**Location:** 2nd Floor
Description: PCBs Light Pink Paint 2nd Floor	

Appendix B
Hazardous Building Material Inspection
Former St. Johnsbury Armory
St. Johnsbury, VT



Date: 2/3/21	**Location:** 1st Floor
Description: PCBs tan subfloor paper under hardwood	



Date: 2/3/21	**Location:** 2nd Floor
Description: PCBs blue wall paint	

Appendix B
Hazardous Building Material Inspection
Former St. Johnsbury Armory
St. Johnsbury, VT



Date: 2/3/21	**Location:** 2nd floor NE room
Description: Non-ACM Ceiling Tile	



Date: 2/3/21	**Location:** 2nd Floor SW Room
Description: Non-ACM Black Electrical Wiring	

Appendix B
Hazardous Building Material Inspection
Former St. Johnsbury Armory
St. Johnsbury, VT



Date: 2/3/21	**Location:** 2nd Floor
Description: Non-ACM Knob and Tube Wiring and Black Electrical Wiring	



Date: 2/3/21	**Location:** 1st Floor
Description: Non-ACM Brown Battleship Linoleum	

APPENDIX C

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132100957
Customer ID: NOBI50
Customer PO:
Project ID:

Attention: Josh Stewart
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301

Project: St. Johnsbury Former Armory

Phone: (603) 224-4182
Fax: (603) 224-2507
Received Date: 02/08/2021 8:30 AM
Analysis Date: 02/11/2021
Collected Date:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
SJ-ACM-1 *132100957-0001*	Gym Floor - 1st Level - S. Side - Black Flooring Felt	Black Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
SJ-ACM-2 *132100957-0002*	Gym Floor - 1st Level - NE Corner - Black Flooring Felt	Black Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
SJ-ACM-3 *132100957-0003*	1st Floor Foyer - S. Wall - Beige Wall Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-4 *132100957-0004*	1st Floor Foyer - S. Wall - Beige Wall Glue	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-5 *132100957-0005*	Attic by Roof Hatch - W. Side of Stairs - Black Knob & Tube Wiring	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-6 *132100957-0006*	Attic by Roof Hatch - Stairwell - Black Knob & Tube Wiring	Black Fibrous Homogeneous	45% Cellulose	55% Non-fibrous (Other)	None Detected
SJ-ACM-7 *132100957-0007*	2nd Level - SW Room - Black Electrical Wiring	Tan/Black Fibrous Homogeneous	80% Cellulose 10% Glass	10% Non-fibrous (Other)	None Detected
SJ-ACM-8 *132100957-0008*	2nd Level - SW Room - Black Electrical Wiring	Tan/Black Fibrous Homogeneous	75% Cellulose 20% Glass	5% Non-fibrous (Other)	None Detected
SJ-ACM-9 *132100957-0009*	2nd Floor - Large Center Room/Foyer N. Side - Brown Flooring Paper	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
SJ-ACM-10 *132100957-0010*	1st Floor SE Room - S. Side - Brown Flooring Paper	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
SJ-ACM-11 *132100957-0011*	2nd Level - NW Room - Ceiling - NW Corner - Black Roofing Tar	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-12 *132100957-0012*	2nd Level - NW Room - Ceiling - W. Side - Black Roofing Tar	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-13 *132100957-0013*	2nd Level - NW Room - E. Fireplace - Fireplace Brick	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-14 *132100957-0014*	2nd Level - NW Room - E. Fireplace - Fireplace Brick	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-15 *132100957-0015*	2nd Level - NW Room - E. Fireplace - Fireplace Mortar	Gray Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected

Initial report from: 02/11/2021 08:00:45

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132100957
Customer ID: NOBI50
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
SJ-ACM-16 *132100957-0016*	2nd Level - NW Room - E. Fireplace - Fireplace Mortar	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-17 *132100957-0017*	Basement - W. Addition - NE Room - Orange Carpet Glue Remnant	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-18 *132100957-0018*	Basement - W. Addition - W. End of Hallway - Orange Carpet Glue Remnant	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-19 *132100957-0019*	1st Level - Main Entrance Bathroom - W. Side - Brown Battleship Linoleum	Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
SJ-ACM-20 *132100957-0020*	1st Level - Main Entrance Bathroom - E. Side - Brown Battleship Linoleum	Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
SJ-ACM-21 *132100957-0021*	Basement - Door at Bottom of Stairwell - Fireproof/Retardant Board	White Fibrous Homogeneous	<1% Glass	100% Non-fibrous (Other)	None Detected
SJ-ACM-22 *132100957-0022*	Basement - Door at Bottom of Stairwell - Fireproof/Retardant Board	Tan/White Fibrous Homogeneous	10% Cellulose <1% Glass	90% Non-fibrous (Other)	None Detected
SJ-ACM-23 *132100957-0023*	Basement - Door at Bottom of Stairwell - Fireproof/Retardant Board	Tan/White Fibrous Homogeneous	10% Cellulose <1% Glass	90% Non-fibrous (Other)	None Detected
SJ-ACM-24 *132100957-0024*	Basement - Boiler Room - Boiler Cementitious Coating	Gray Fibrous Homogeneous	3% Glass	97% Non-fibrous (Other)	None Detected
SJ-ACM-25 *132100957-0025*	Basement - Boiler Room - Boiler Cementitious Coating	Gray Fibrous Homogeneous	3% Glass	97% Non-fibrous (Other)	None Detected
SJ-ACM-26 *132100957-0026*	Basement - Boiler Room - Boiler Cementitious Coating	Gray Fibrous Homogeneous	3% Glass	97% Non-fibrous (Other)	None Detected
SJ-ACM-27 *132100957-0027*	Boiler Door - Putty Material - Boiler Door Putty	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-28 *132100957-0028*	Boiler Door - Putty Material - Boiler Door Putty	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-29 *132100957-0029*	Boiler Door - Putty Material - Boiler Door Putty	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-30 *132100957-0030*	Boiler - Interior - Firebrick	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-31 *132100957-0031*	Boiler - Interior - Firebrick	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-32 *132100957-0032*	Boiler - Stacked by Boiler - Firebrick	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 02/11/2021 08:00:45

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132100957
Customer ID: NOBI50
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
SJ-ACM-33 *132100957-0033*	Boiler - Bottom Ext. Layer - Blue Tinted Insulation	Blue Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected
SJ-ACM-34 *132100957-0034*	Boiler - Bottom Ext. Layer - Blue Tinted Insulation	Blue Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected
SJ-ACM-35 *132100957-0035*	Boiler - Bottom Layer - Blue Tinted Insulation	Blue Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected
SJ-ACM-36 *132100957-0036*	1st Level - Main Foyer - E. Side - Flooring Glue Remnant	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-37 *132100957-0037*	1st Level - Main Foyer - W. Side - Flooring Glue Remnant	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-38 *132100957-0038*	Basement - S. Corridor - N. Wall - Tan Wall Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-39 *132100957-0039*	Basement - S. Corridor - NE Corner - Tan Wall Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-ACM-40 *132100957-0040*	2md Level - NE Room - N. Side - White 2x4 Ceiling Tile	Brown/White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
SJ-ACM-41 *132100957-0041*	2md Level - NE Room - S. Side - White 2x4 Ceiling Tile	Brown/White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
SJ-ACM-42 *132100957-0042*	2nd Level - NW Room - N. Side - Ceiling Panel Remnant	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
SJ-ACM-43 *132100957-0043*	2nd Level - NW Room - S. Side - Ceiling Panel Remnant	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
SJ-ACM-44 *132100957-0044*	Boiler Room - Electrical Panel - NW Corner - High Voltage Wire Coating	Brown/Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
SJ-ACM-45 *132100957-0045*	Boiler Room - Electrical Panel - NW Corner - High Voltage Wire Coating	Brown/Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected

Analyst(s)
Ramon Buenaventura (45)

Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 02/11/2021 08:00:45

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132100957
Customer ID: NOBI50
Customer PO:
Project ID:

Attention: Josh Stewart
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301

Project: St. Johnsbury Former Armory

Phone: (603) 224-4182
Fax: (603) 224-2507
Received Date: 02/08/2021 8:30 AM
Analysis Date: 02/23/2021
Collected Date:

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
SJ-ACM-3 *132100957-0003*	1st Floor Foyer - S. Wall - Beige Wall Glue	Yellow Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
SJ-ACM-11 *132100957-0011*	2nd Level - NW Room - Ceiling - NW Corner - Black Roofing Tar	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
SJ-ACM-17 *132100957-0017*	Basement - W. Addition - NE Room - Orange Carpet Glue Remnant	Yellow Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
SJ-ACM-27 *132100957-0027*	Boiler Door - Putty Material - Boiler Door Putty	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
SJ-ACM-34 *132100957-0034*	Boiler - Bottom Ext. Layer - Blue Tinted Insulation	Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
SJ-ACM-36 *132100957-0036*	1st Level - Main Foyer - E. Side - Flooring Glue Remnant	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
SJ-ACM-38 *132100957-0038*	Basement - S. Corridor - N. Wall - Tan Wall Adhesive	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Matthew Conley (7)

Steve Grise, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from: 02/23/2021 12:09:37

OrderID: 132100957

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 132100957

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: Nobis	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 18 Chenell DR	
City: Concord **State/Province:** NH	**Zip/Postal Code:** 03301 **Country:** USA
Report To (Name): Joshua Stewart	**Telephone #:**
Email Address: JStewart@nobis-group.com	**Fax #:** **Purchase Order:**
Project Name/Number: St. Johnsbury Former Armory	**Please Provide Results:** ☐ Fax ☒ Email
U.S. State Samples Taken: Vermont	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM – Bulk
☒ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☒ point count if 2% asbestos or less
☐ Standard Addition Method	

☒ Check For Positive Stop – Clearly Identify Homogenous Group **Date Sampled:** ~~2/4~~ 2/3-2/4/21

Samplers Name: Christopher Clement **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
SJ-ACM-1		Entry Floor - 1st level - S. side	Black flooring felt
-2		" " - NE corner	" "
-3		1st Floor Foyer - S. wall	Beige wall stucco
-4		" "	" "
-5		Attic by Roof hatch - W. side of stairs	Black knob + tube wiring
-6		Attic by Roof hatch - Stairwell	" "
-7		2nd level - SW. Room -	Black electrical wiring
-8		" "	" "
-9		2nd Floor - Large center Room/Foyer N. side	brown flooring paper
-10		1st Floor SE Room - S. side	" "

Client Sample #(s): -

Total # of Samples: 45

Relinquished (Client): **Date:** 2/4/21 **Time:**

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

880 1/2

REC'D EMSL-BOSTON FEB 08 2021

fx 7728.1905 9949

OrderID: 132100957

EMSL ANALYTICAL, INC.
LABORATORY•PRODUCTS•TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 132100957

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
-11		2nd level - NW Room - ceiling - NW corner	Black Roofing tar
-12		" - W. side	"
-13		2nd level - NW Room - E. fireplace	Fire place brick
-14		" "	" "
-15		" "	Fireplace mortar
-16		" "	" "
-17		~~Other~~ Basement - W. addition NE Room	Orange carpet glue ~~cement~~
-18		" " " - W. addition - W. end of hallway	"
-19		1st level - Main entrance bathroom - W. side	Brown buttles hex linoleum
-20		" " - E. side	"
-21		~~Fire~~ Basement - ~~Left~~ Door @ bottom of Stairwell	Fire proof/retardant board
-22		" "	↓ ↓
-23		" "	
-24		Basement - Boiler ~~Room~~	Boiler cementitious coating
-25		Basement - " "	"
-26		" "	" "
-27		Boiler door putty material	Boiler - ~~Left~~ Door Putty
-28		"	↓ ↓
-29		" "	
-30		Boiler - Interior	Fire brick
31		↓ - Interior	↓
32		- stacked by boiler	
33		Boiler - bottom ext. layer	Blue fiber insulation
34		" "	" "
35			

*Comments/Special Instructions:

Page _____ of _____ pages

REC'D EMSL-BOSTON FEB 08 2021

Controlled Document – Asbestos COC – R6 – 11/29/2012

OrderID: 132100957

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*:

132100957

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
-35		Boiler - bottom layer	blue tinted insulation
-36		1st level - Main Foyer E. side	Flooring glue Remnant
-37		" " W. side	" "
-38		Basement - S. corridor - N. wall	Tan wall adhesive
-39		- NE corner	" "
-40		2nd level - NE Room. N. side	white 2x4 ceiling tile
-41		- S. side	" "
-42		~~Ceiling~~ 2nd level - NW ~~Office~~ Room N. side	ceiling panel Remnant
-42		" " - S. side	" "
-44		Boiler Room - electrical panel NW corner	High voltage wire coating
-45		"	"

***Comments/Special Instructions:**

Page _____ of _____ pages

REC'D EMSL-BOSTON FEB 08 2021

Controlled Document – Asbestos COC – R6 – 11/29/2012

APPENDIX D

K-D ASSOCIATES, INC.
ENVIRONMENTAL CONSULTING AND CONTRACTING

15 February 2021

Mr. Josh Stewart
Nobis
18 Chenell Drive
Concord, New Hampshire 03301

Re: Lead Based Paint Assessment
Former St. Johnsbury Armory, 1249 Main Street, St. Johnsbury, Vermont
K-D Project No.: 21038-001

Dear Mr. Stewart,

At your request a representative of K-D Associates, Inc. visited the former St. Johnsbury Armory at 1249 Main Street in St. Johnsbury, Vermont to conduct an inspection for the presence of lead-based paint (LBP) on interior and exterior surfaces. The survey evaluated painted surfaces for the presence, quantity, locations, and character of LBP. All work was conducted by a State of Vermont certified Lead Inspector.

Surfaces in the Armory were classified by building component and substrate. Testing was specific and in sufficient detail to determine if individual surfaces do or do not contain LBP. All paint sampling was done by XRF testing. No results in the inconclusive range were recorded and no paint chip sampling or laboratory analysis was needed. The survey was conducted using a Niton XLp 300 model (Serial No. 7709) in the Lead-In-Paint K & L variable time reading mode. According to the instruments *Performance Characteristic Sheet*, the inconclusive range for this model is 0.8 to 1.2 mg/cm^2. Substrate correction is also not needed for this model on brick, concrete, drywall, plaster and wood. The objective of the testing was to find LBP surfaces with the concentration of lead above 1.0 mg/cm^2 by XRF analysis.

The results of this inspection indicate that lead in amounts greater than or equal to 1.0 mg/cm^2 in paint (i.e Lead Based Paint) was found on the following surfaces:

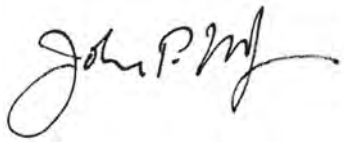
Component	Location	Color	Lead Content (mg/cm^2)
Walls, plaster, B and D	Room 6, Second Level	Tan	1.3 to 1.5
Stair railing, wood	First to second level	Brown	1.9
Wall, brick, A, B, D	Room 20, Basement	Tan	3.0 to 4.0
Ceiling, metal	Room 21, Basement	White	1.6
Walls, brick, A, B, C, D	Room 21, Basement	Green	1.2 to 1.6
Floor, cement	Room 22, Basement	Green	1.5
Walls, brick, A, B, C, D	Room 23, Basement	Green	2.7 to 3.1
Floor, cement	Room 23, Basement	Grey	1.3
Stair riser	Basement to first level	White	1.1
Window trim, A, B, C, D	Exterior	White	12.2 to19.3
Window sash, A, B, C, D	Exterior	Green	19.9 to 28.6
Window well, A, B, C, D	Exterior or interior with storm	White	12.6 to 19.0
Porch trim, D	Exterior	White	1.7
Column, wood	Room 6	Brown	1.9

41 IDX Drive • Suite 209 • South Burlington • Vermont • 05403-7757
(802) 862-7490 • (800) 639-2035 • Fax (802) 660-2462
e-mail: kdai@kdassociatesinc.com • website: www.kdassociatesinc.com

Field sheets showing individual measurements for components are attached. Floor plan sketches are also included with room numbers referenced on the field sheets and results table. The letter (A, B, C, D) designation for the building (and room) refers to the side of the building where the component is located.

Please do not hesitate to call if you have any questions or need additional information.

Sincerely,



John P. Madigan

41 IDX Drive • Suite 209 • South Burlington • Vermont • 05403-7757
(802) 862-7490 • (800) 639-2035 • Fax (802) 660-2462
e-mail: kdai@kdassociatesinc.com • website: www.kdassociatesinc.com

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 1

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Panel	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Wood	Wall	White/green	Fair/poor	0.0/0.0	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.10	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.30	n/a	n/a	
D	Brick	Wall	White	Fair/poor	0.5	n/a	n/a	
		Baseboard						
D	Wood	Door	Unpainted	Fair/poor	0.00	n/a	n/a	
		Door casing						
D	Wood	Door jamb	Unpainted	Fair/poor	0.00	n/a	n/a	
B	Wood	Window sash	Green	Fair/poor	0.4	n/a	n/a	
		Window apron						
		Window stool						
B	Wood	Window jamb	Green	Fair/poor	0.1	n/a	n/a	
		Window casing						
	Metal	Heater	Silver	Fair/poor	0.05	n/a	n/a	
	Wood	Floor	White	Good	0.00	n/a	n/a	
	Wood	Floor	Green	Good	0.00	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 2

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Plaster	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Panel/wood	Wall	White	Fair/poor	0.4/0.4	n/a	n/a	
B	Panel/wood	Wall	White	Fair/poor	0.0/0.1	n/a	n/a	
D	Panel/wood	Wall	White	Fair/poor	0.0/0.0	n/a	n/a	
A	Wood	Baseboard	Green	Fair	0.0	n/a	n/a	
D	Wood	Door	Green	Fair/poor	0.24	n/a	n/a	
D	Wood	Door casing	Green	Fair/poor	0.0	n/a	n/a	
D	Wood	Door jamb	Green	Fair/poor	0.00	n/a	n/a	
A	Wood	Window sash	Green	Fair/poor	0.17	n/a	n/a	
A	Wood	Window apron	Green	Fair/poor	0.01	n/a	n/a	
A	Wood	Window stool	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window jamb	Green	Fair/poor	0.20	n/a	n/a	
A	Wood	Window casing	Green	Fair/poor	0.0	n/a	n/a	
	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	
B	Wood	Chair rail	White	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 3

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Plaster	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Plaster	Wall	Orange	Fair/poor	0.01	n/a	n/a	
B	Plaster	Wall	Orange	Fair/poor	0.04	n/a	n/a	
C	Plaster	Wall	Orange	Fair/poor	0.00	n/a	n/a	
D	Plaster	Wall	Orange	Fair/poor	0.00	n/a	n/a	
A	Wood	Baseboard	Orange	Fair/poor	0.02	n/a	n/a	
C	Wood	Door	Green	Fair/poor	0.0	n/a	n/a	
C	Wood	Door casing	Brown	Fair/poor	0.1	n/a	n/a	
C	Wood	Door jamb	Brown	Fair/poor	0.11	n/a	n/a	
A	Wood	Window sash	Brown	Fair/poor	0.01	n/a	n/a	
A	Wood	Window apron	Brown	Fair/poor	0.21	n/a	n/a	
A	Wood	Window stool	Brown	Fair/poor	0.0	n/a	n/a	
A	Wood	Window jamb	Brown	Fair/poor	0.0	n/a	n/a	
A	Wood	Window casing	Brown	Fair/poor	0.0	n/a	n/a	
	Metal	Heater	Brown	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 4

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Gypsum board	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
B	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
C	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
D	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
B	Wood	Baseboard	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Door	White	Fair/poor	0.15	n/a	n/a	
A	Wood	Door casing	Green	Fair/poor	0.01	n/a	n/a	
A	Wood	Door jamb	Green	Fair/poor	0.02	n/a	n/a	
D	Wood	Window sash	Green	Fair/poor	0.14	n/a	n/a	
D	Wood	Window apron	Green	Fair/poor	0.21	n/a	n/a	
D	Wood	Window stool	Green	Fair/poor	0.02	n/a	n/a	
D	Wood	Window jamb	Green	Fair/poor	0.01	n/a	n/a	
D	Wood	Window casing	Green	Fair/poor	0.0	n/a	n/a	
B	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 5

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Gypsum board	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Gypsum board	Wall	Green	Fair/poor	0.01	n/a	n/a	
B	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
C	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
D	Gypsum board	Wall	Green	Fair/poor	0.0	n/a	n/a	
B	Wood	Baseboard	Green	Fair/poor	0.0	n/a	n/a	
C	Wood	Door	Grey	Fair/poor	0.1	n/a	n/a	
C	Wood	Door casing	Green	Fair/poor	0.02	n/a	n/a	
C	Wood	Door jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window sash	Green	Fair/poor	0.01	n/a	n/a	
A	Wood	Window apron	Green	Fair/poor	0.02	n/a	n/a	
A	Wood	Window stool	Green	Fair/poor	0.02	n/a	n/a	
A	Wood	Window jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window casing	Green	Fair/poor	0.0	n/a	n/a	
A	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 6

XRF Serial No.: 26588 Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Plaster	Ceiling	White	Fair/poor	0.03	n/a	n/a	
A	Plaster	Wall	Tan	Fair/poor	0.4	n/a	n/a	
B	Plaster	Wall	Tan	Fair/poor	**1.3**	n/a	n/a	**Positive**
C	Plaster	Wall	Tan	Fair/poor	0.9	n/a	n/a	
D	Plaster	Wall	Tan	Fair/poor	**1.5**	n/a	n/a	**Positive**
B	Wood	Baseboard	Green	Fair/poor	0.11	n/a	n/a	
C	Wood	Door	Grey	Fair/poor	0.1	n/a	n/a	
C	Wood	Door casing	Green	Fair/poor	0.0	n/a	n/a	
C	Wood	Door jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window sash	Green	Fair/poor	0.16	n/a	n/a	
A	Wood	Window apron	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window stool	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window casing	Green	Fair/poor	0.0	n/a	n/a	
D	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	
	Wood	Stair railing	Brown	Fair/poor	0.15	n/a	n/a	
	Wood	Column	Brown	Fair/poor	**1.9**	n/a	n/a	**Positive**

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 7

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Plaster	Ceiling	White	Fair/poor	0.12	n/a	n/a	
A	Plaster	Wall	Yellow	Fair/poor	0.01	n/a	n/a	
B	Plaster	Wall	Yellow	Fair/poor	0.06	n/a	n/a	
C	Plaster	Wall	Yellow	Fair/poor	0.01	n/a	n/a	
D	Plaster	Wall	Yellow	Fair/poor	0.10	n/a	n/a	
A	Wood	Baseboard	Red	Fair/poor	0.18	n/a	n/a	
D	Wood	Door	Red	Fair/poor	0.11	n/a	n/a	
D	Wood	Door casing	Red	Fair/poor	0.02	n/a	n/a	
D	Wood	Door jamb	Red	Fair/poor	0.18	n/a	n/a	
A	Wood	Window sash	Red	Fair/poor	0.16	n/a	n/a	
A	Wood	Window apron	Red	Fair/poor	0.0	n/a	n/a	
A	Wood	Window stool	Red	Fair/poor	0.0	n/a	n/a	
A	Wood	Window jamb	Red	Fair/poor	0.0	n/a	n/a	
A	Wood	Window casing	Red	Fair/poor	0.0	n/a	n/a	
A	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 8

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Plaster	Ceiling	White	Fair/poor	0.10	n/a	n/a	
A	Plaster	Wall	Blue	Fair/poor	0.01	n/a	n/a	
B	Plaster	Wall	Blue	Fair/poor	0.04	n/a	n/a	
C	Plaster	Wall	Blue	Fair/poor	0.01	n/a	n/a	
D	Plaster	Wall	Blue	Fair/poor	0.0	n/a	n/a	
D	Wood	Baseboard	Blue	Fair/poor	0.0	n/a	n/a	
D	Wood	Door	Blue	Fair/poor	0.0	n/a	n/a	
D	Wood	Door casing	Blue	Fair/poor	0.0	n/a	n/a	
D	Wood	Door jamb	Blue	Fair/poor	0.10	n/a	n/a	
B	Wood	Window sash	Blue	Fair/poor	0.10	n/a	n/a	
B	Wood	Window apron	Blue	Fair/poor	0.0	n/a	n/a	
B	Wood	Window stool	Blue	Fair/poor	0.0	n/a	n/a	
B	Wood	Window jamb	Blue	Fair/poor	0.0	n/a	n/a	
B	Wood	Window casing	Blue	Fair/poor	0.0	n/a	n/a	
B	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont Date: 3 February 2021

Room Equivalent: Room 9

XRF Serial No.: 26588 Inspector: John P. Madigan, Lead Inspector No.: IT436397 Signature John P. Madigan

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Plaster	Wall	Blue	Fair/poor	0.0	n/a	n/a	
B	Plaster	Wall	White	Fair/poor	0.0	n/a	n/a	
C	Plaster	Wall	White	Fair/poor	0.0	n/a	n/a	
D	Plaster	Wall	White	Fair/poor	0.01	n/a	n/a	
		Baseboard						
		Door						
		Door casing						
		Door jamb						
B	Wood	Window sash	White	Fair/poor	0.12	n/a	n/a	
B	Wood	Window apron	White	Fair/poor	0.01	n/a	n/a	
B	Wood	Window stool	White	Fair/poor	0.0	n/a	n/a	
B	Wood	Window jamb	White	Fair/poor	0.0	n/a	n/a	
B	Wood	Window casing	White	Fair/poor	0.0	n/a	n/a	
B	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 10

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Plaster	Wall	Brown	Fair/poor	0.0	n/a	n/a	
B	Panel	Wall	Brown	Fair/poor	0.0	n/a	n/a	
C	Panel	Wall	Brown	Fair/poor	0.0	n/a	n/a	
D	Panel	Wall	Brown	Fair/poor	0.0	n/a	n/a	
A	Wood	Baseboard	Brown	Fair/poor	0.0	n/a	n/a	
A		Door	Brown					
A	Wood	Door casing	Brown	Fair/poor	0.0	n/a	n/a	
B	Wood	Door jamb	Brown	Fair/poor	0.01	n/a	n/a	
D	Wood	Window sash	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window apron	Brown	Fair/poor	0.03	n/a	n/a	
D	Wood	Window stool	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window jamb	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window casing	Brown	Fair/poor	0.0	n/a	n/a	
D	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 11

XRF Serial No.: 26588 Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature John P. Madigan

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Pressboard	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Panel	Wall	Unpainted					
B	Panel	Wall	Unpainted					
C	Panel	Wall	Unpainted					
D	Panel	Wall	Unpainted					
A	Wood	Baseboard	White	Fair/poor	0.0	n/a	n/a	
		Door						
B	Wood	Door casing	White	Fair/poor	0.0	n/a	n/a	
B	Wood	Door jamb	White	Fair/poor	0.02	n/a	n/a	
C	Wood	Window sash	White	Fair/poor	0.09	n/a	n/a	
C	Wood	Window apron	White	Fair/poor	0.01	n/a	n/a	
C	Wood	Window stool	White	Fair/poor	0.0	n/a	n/a	
C	Wood	Window jamb	White	Fair/poor	0.0	n/a	n/a	
C	Wood	Window casing	White	Fair/poor	0.0	n/a	n/a	
	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 12

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Gypsum board	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Plaster	Wall	Brown	Fair/poor	0.0	n/a	n/a	
B	Panel	Wall	Brown	Fair/poor	0.0	n/a	n/a	
C	Panel	Wall	Brown	Fair/poor	0.0	n/a	n/a	
D	Panel	Wall	Brown	Fair/poor	0.0	n/a	n/a	
A	Wood	Baseboard	Brown	Fair/poor	0.0	n/a	n/a	
C	Wood	Door	Brown	Fair/poor	0.0	n/a	n/a	
C	Wood	Door casing	Brown	Fair/poor	0.0	n/a	n/a	
C	Wood	Door jamb	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window sash	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window apron	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window stool	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window jamb	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window casing	Brown	Fair/poor	0.0	n/a	n/a	
	Metal	Heater	Silver	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 13 and 14

XRF Serial No.: 26588 Inspector: John P. Madigan, Lead Inspector No.: IT436397 Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.1	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
D	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
		Baseboard						
C	Wood	Door	Brown	Fair/poor	0.0	n/a	n/a	
A	Wood	Door casing	White	Fair/poor	0.2	n/a	n/a	
A	Wood	Door jamb	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window sash	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window apron	White	Fair/poor	0.1	n/a	n/a	
D	Wood	Window stool	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window jamb	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window casing	White	Fair/poor	0.0	n/a	n/a	
	Cement	Floor	Brown	Fair/poor	0.3	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 15

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Brick	Wall	White	Fair/poor	0.2	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.3	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.1	n/a	n/a	
D	Brick	Wall	White	Fair/poor	0.1	n/a	n/a	
		Baseboard						
		Door						
		Door casing						
		Door jamb						
D	Wood	Window sash	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window apron	White	Fair/poor	0.1	n/a	n/a	
D	Wood	Window stool	White	Fair/poor	0.2	n/a	n/a	
D	Wood	Window jamb	White	Fair/poor	0.2	n/a	n/a	
D	Wood	Window casing	White	Fair/poor	0.0	n/a	n/a	
	Cement	Floor	Brown	Fair/poor	0.2	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 16

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Brick	Wall	White	Fair/poor	0.01	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.3	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.2	n/a	n/a	
D	Brick	Wall	White	Fair/poor	0.1	n/a	n/a	
		Baseboard						
		Door						
		Door casing						
		Door jamb						
D	Wood	Window sash	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window apron	Brown	Fair/poor	0.1	n/a	n/a	
D	Wood	Window stool	Brown	Fair/poor	0.0	n/a	n/a	
D	Wood	Window jamb	Brown	Fair/poor	0.1	n/a	n/a	
D	Wood	Window casing	Brown	Fair/poor	0.0	n/a	n/a	
	Cement	Floor	Grey	Fair/poor	0.2	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 17

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Cement	Wall	White	Fair/poor	0.0	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.1	n/a	n/a	
D	Brick	Wall	Green	Fair/poor	0.1	n/a	n/a	
		Baseboard						
B	Metal	Door	Grey	Fair/poor	0.02	n/a	n/a	
B	Wood	Door casing	Grey	Fair/poor	0.1	n/a	n/a	
B	Wood	Door jamb	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window sash	White	Fair/poor	011	n/a	n/a	
D	Wood	Window apron	White	Fair/poor	0.1	n/a	n/a	
D	Wood	Window stool	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Window jamb	White	Fair/poor	0.1	n/a	n/a	
D	Wood	Window casing	White	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 18

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
D	Cement	Wall	White	Fair/poor	0.0	n/a	n/a	
		Baseboard						
C	Metal	Door	Grey	Fair/poor	0.4	n/a	n/a	
C	Metal	Door casing	Grey	Fair/poor	0.1	n/a	n/a	
C	Metal	Door jamb	Grey	Fair/poor	0.2	n/a	n/a	
		Window sash						
		Window apron						
		Window stool						
		Window jamb						
		Window casing						
	Cement	Floor	Grey	Fair/poor	0.0	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 19

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
B	Brick	Wall	White	Fair/poor	0.0	n/a	n/a	
C	Brick	Wall	White	Fair/poor	0.1	n/a	n/a	
D	Cement	Wall	White	Fair/poor	0.0	n/a	n/a	
		Baseboard						
C	Metal	Door	Grey	Fair/poor	0.0	n/a	n/a	
C	Wood	Door casing	Grey	Fair/poor	0.1	n/a	n/a	
C	Wood	Door jamb	Grey	Fair/poor	0.0	n/a	n/a	
B	Wood	Window sash	White	Fair/poor	01	n/a	n/a	
B	Wood	Window apron	White	Fair/poor	0.1	n/a	n/a	
B	Wood	Window stool	White	Fair/poor	0.0	n/a	n/a	
B	Wood	Window jamb	White	Fair/poor	0.1	n/a	n/a	
B	Wood	Window casing	White	Fair/poor	0.0	n/a	n/a	
	Cement	Floor	Grey	Fair/poor	0.1	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 20

XRF Serial No.: 26588 Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
		Ceiling						
A	Brick	Wall	Tan	Fair/poor	**3.1**	n/a	n/a	**Positive**
B	Brick	Wall	Tan	Fair/poor	**4.0**	n/a	n/a	**Positive**
C		Wall						
D	Brick	Wall	Tan	Fair/poor	**3.0**	n/a	n/a	**Positive**
		Baseboard						
		Door						
		Door casing						
		Door jamb						
B	Wood	Window sash	Green	Fair/poor	0.0	n/a	n/a	
B	Wood	Window apron	Green	Fair/poor	0.1	n/a	n/a	
B	Wood	Window stool	Green	Fair/poor	0.3	n/a	n/a	
B	Wood	Window jamb	Green	Fair/poor	0.0	n/a	n/a	
B	Wood	Window casing	Green	Fair/poor	0.1	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 21

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Metal	Ceiling	White	Fair/poor	**1.6**	n/a	n/a	**Positive**
A	Brick	Wall	Green	Fair/poor	**1.2**	n/a	n/a	**Positive**
B	Brick	Wall	Green	Fair/poor	**1.3**	n/a	n/a	**Positive**
C	Brick	Wall	Green	Fair/poor	**1.6**	n/a	n/a	**Positive**
D	Brick	Wall	Green	Fair/poor	**1.5**	n/a	n/a	**Positive**
		Baseboard						
D	Wood	Door	Green	Fair/poor	0.0	n/a	n/a	
D	Wood	Door casing	Green	Fair/poor	0.0	n/a	n/a	
D	Wood	Door jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window sash	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window apron	Green	Fair/poor	0.1	n/a	n/a	
A	Wood	Window stool	Green	Fair/poor	0.3	n/a	n/a	
A	Wood	Window jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window casing	Green	Fair/poor	0.1	n/a	n/a	
	Cement	Floor	Green	Fair/poor	0.1	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 22

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Wood	Ceiling	White	Fair/poor	0.2	n/a	n/a	
A	Wood	Wall	White	Fair/poor	0.3	n/a	n/a	
B	Wood	Wall	Yellow	Fair/poor	0.0	n/a	n/a	
C	Wood	Wall	White	Fair/poor	0.0	n/a	n/a	
D	Wood	Wall	Yellow	Fair/poor	0.1	n/a	n/a	
		Baseboard						
D	Wood	Door	Green	Fair/poor	0.0	n/a	n/a	
D	Wood	Door casing	Green	Fair/poor	0.0	n/a	n/a	
D	Wood	Door jamb	Green	Fair/poor	0.2	n/a	n/a	
A	Wood	Window sash	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window apron	Green	Fair/poor	0.1	n/a	n/a	
A	Wood	Window stool	Green	Fair/poor	0.3	n/a	n/a	
A	Wood	Window jamb	Green	Fair/poor	0.0	n/a	n/a	
A	Wood	Window casing	Green	Fair/poor	0.1	n/a	n/a	
	Cement	Floor	Green	Fair/poor	**1.5**	n/a	n/a	**Positive**

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

Room Equivalent: Room 23

XRF Serial No.: 26588

Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
	Wood	Ceiling	White	Fair/poor	0.0	n/a	n/a	
A	Brick	Wall	Green	Fair/poor	**2.9**	n/a	n/a	**Positive**
B	Brick	Wall	Green	Fair/poor	**2.7**	n/a	n/a	**Positive**
C	Brick	Wall	Green	Fair/poor	**3.0**	n/a	n/a	**Positive**
D	Brick	Wall	Green	Fair/poor	**3.1**	n/a	n/a	**Positive**
		Baseboard						
A	Metal	Door	White	Fair/poor	0.0	n/a	n/a	
A	Metal	Door casing	White	Fair/poor	0.0	n/a	n/a	
A	Metal	Door jamb	White	Fair/poor	0.2	n/a	n/a	
		Window sash						
		Window apron						
		Window stool						
		Window jamb						
		Window casing						
	Cement	Floor	Grey	Fair/poor	**1.3**	n/a	n/a	**Positive**
	Wood	Stair riser	White	Fair/poor	**1.1**	n/a	n/a	**Positive**
	Wood	Stair rail	Green	Fair/poor	0.2	n/a	n/a	

K-D Associates, Inc.
Lead-Based Paint Inspection Results

Address/Unit No.: Armory Building, 1249 Main Street, St. Johnsbury, Vermont

Date: 3 February 2021

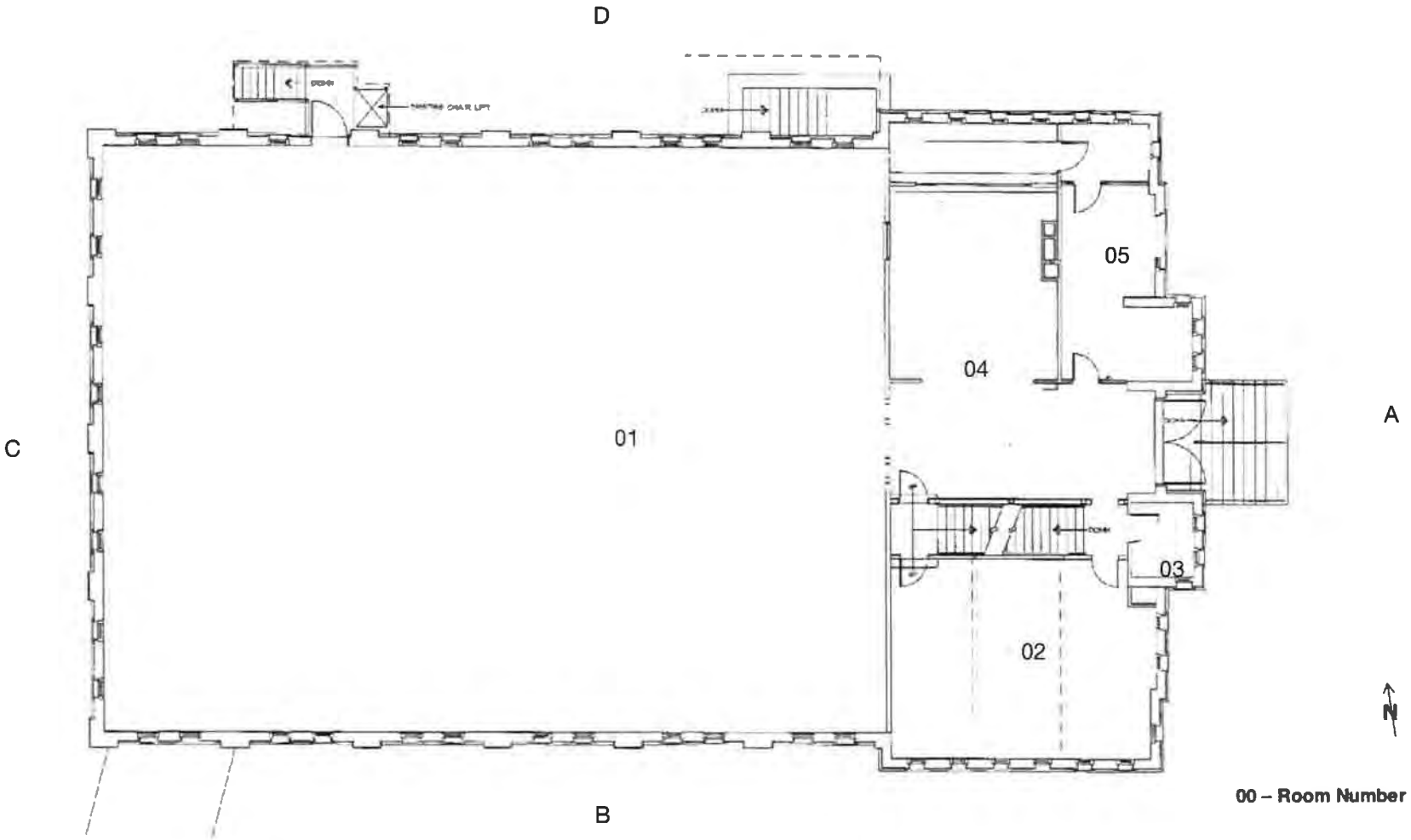
Room Equivalent: Exterior

XRF Serial No.: 26588

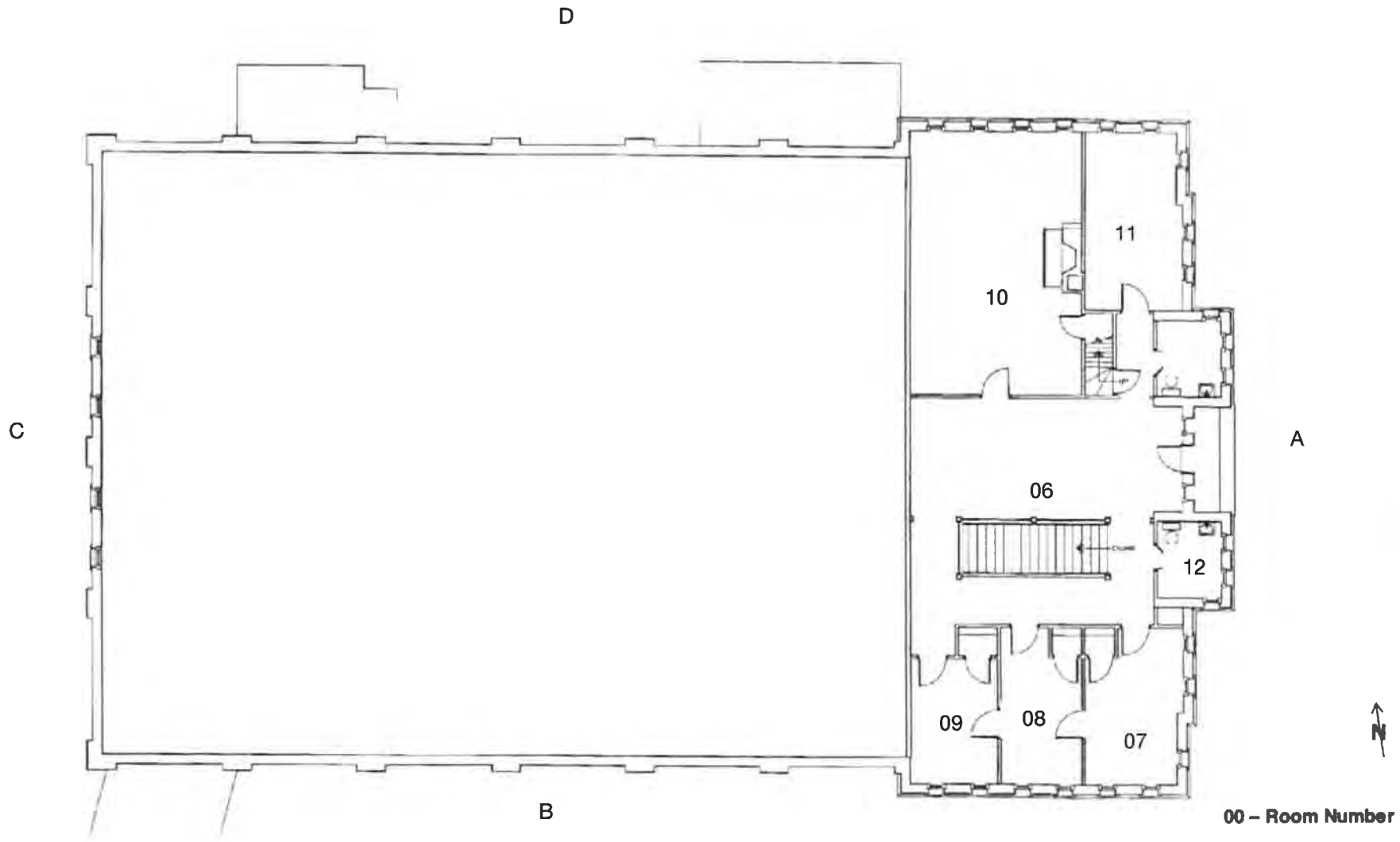
Inspector: John P. Madigan, Lead Inspector No.: IT436397

Signature

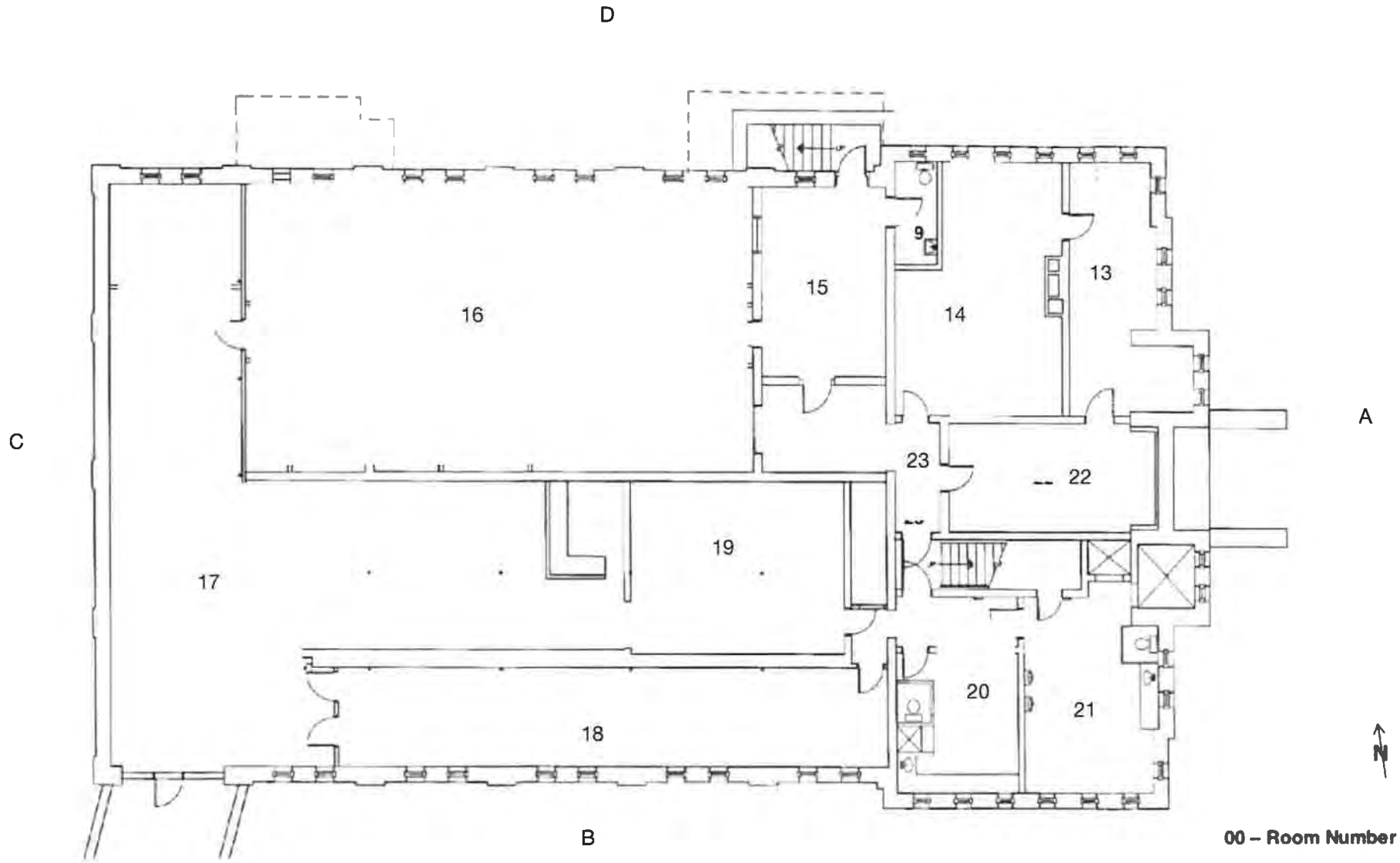
Test Location	Substrate	Component	Color	Condition	XRF Reading (mg/sq.cm)	Correction Value	Corrected Reading	Classification
A	Wood	Window trim	White	Fair	**17.1**	n/a	n/a	**Positive**
A	Wood	Window sash	Green	Fair	**28.6**	n/a	n/a	**Positive**
A	Wood	Window well	Green	Fair	**12.6**	n/a	n/a	**Positive**
B	Wood	Window trim	White	Fair	**19.3**	n/a	n/a	**Positive**
B	Wood	Window sash	Green	Fair	**20.8**	n/a	n/a	**Positive**
B	Wood	Window well	Green	Fair	**19.0**	n/a	n/a	**Positive**
D	Wood	Window trim	White	Fair	**12.2**	n/a	n/a	**Positive**
D	Wood	Window sash	Green	Fair	**19.9**	n/a	n/a	**Positive**
D	Wood	Window well	Green	Fair	**15.4**	n/a	n/a	**Positive**
D	Wood	Porch trim	White	Fair	**1.7**	n/a	n/a	**Positive**



St. Johnsbury Armory, St. Johnsbury, Vermont
First Level



St. Johnsbury Armory, St. Johnsbury, Vermont
Second Level



St. Johnsbury Armory, St. Johnsbury, Vermont
Basement

Calibration Check Test Results

Address/ Unit No.: St. Johnsbury Armory, 1249 Main Street, St. Johnsbury, Vermont

Device: Niton XLP 300 XRF Serial No.: SN# 7709

Contractor: K-D Associates, Inc. Date: 3 February 2021

Inspector: John P. Madigan Signature: John P. Madigan

NIST SRM Used 1.04 *mg/cm²* Calibration Check Tolerance Used: + - 0.2 *mg/cm²*

First Calibration Check:

NIST SRM			First Average	Difference Between Second Average and MIST SRM*
First Reading	Second Reading	Third Reading		
1.00	1.00	1.00	1.00	0.04

Second Calibration Check:

NIST SRM			First Average	Difference Between Second Average and MIST SRM*
First Reading	Second Reading	Third Reading		
1.01	1.01	1.00	1.01	0.03

Third Calibration Check:

NIST SRM			First Average	Difference Between Second Average and MIST SRM*
First Reading	Second Reading	Third Reading		

Fourth Calibration Check:

NIST SRM			First Average	Difference Between Second Average and MIST SRM*
First Reading	Second Reading	Third Reading		

*If the difference of the Calibration Check Average from the NIST SRM film value is greater than the specified Calibration Check Tolerance for this device, consult the manufacturer's recommendations to bring the instrument back into control. Retest all testing combination tested since the last successful Calibration Check test.

LEAD INSPECTOR TECHNICIAN I

JOHN P MADIGAN
13 DUSTAN RD
CRAFTSBURY COMMON, VT 05827

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: IT436397 EXPIRES: Tuesday, July 13, 2021

CERTIFICATE OF LICENSE
VERMONT LEAD REGULATORY PROGRAM

THIS CERTIFICATE SHALL REMAIN IN FORCE UNTIL THE EXPIRATION DATE UNLESS REVOKED OR VOIDED BEFORE THAT TIME. THIS CERTIFICATE IS NOT TRANSFERABLE AND IS VALID ONLY FOR THE ABOVE PARTY.

COPY OF THIS CERTIFICATE AND PHOTO ID CARD MUST BE ON SITE AT ALL TIMES.

APPENDIX E

Eastern Analytical, Inc.

professional laboratory and drilling services

Tim Andrews
Nobis Group
18 Chenell Drive
Concord, NH 03301

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 221858
Client Identification: St. Johnsbury Armory | 93203.11
Date Received: 2/3/2021

Report revision/reissue: Revision, replaces report dated 2/9/2021.

Revision information: Per client request, the report has been amended to include the extraction method.

Dear Mr. Andrews:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw — 2.17.21 — 7

Lorraine Olashaw, Lab Director | Date | # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **221858**

Client: **Nobis Group**

Client Designation: **St. Johnsbury Armory | 93203.11**

Temperature upon receipt (°C): 3.1 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date/Time Sampled		Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
221858.01	P-1	2/3/21	2/3/21	11:45	solid	96.0	Adheres to Sample Acceptance Policy
221858.02	P-2	2/3/21	2/3/21	12:20	solid	97.5	Adheres to Sample Acceptance Policy
221858.03	P-3	2/3/21	2/3/21	12:30	solid	88.5	Adheres to Sample Acceptance Policy
221858.04	P-4	2/3/21	2/3/21	12:40	solid	98.0	Adheres to Sample Acceptance Policy
221858.05	P-5	2/3/21	2/3/21	12:50	solid	98.4	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:
1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd Edition or noted Revision year.
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 4th edition, 1992

LABORATORY REPORT

EAI ID#: **221858**

Client: **Nobis Group**

Client Designation: **St. Johnsbury Armory | 93203.11**

Client Sample ID:	P-1
Lab Sample ID:	221858.01
Matrix:	solid
Date Sampled:	2/3/21
Date Received:	2/3/21

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method Prep	Method Analytical	Analyst
PCB-1016	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1221	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1232	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1242	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1248	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1254	**4.4**	0.5	29	mg/kg	2/5/21	13:28	2/4/21	3540C	8082A	MA
PCB-1260	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1262	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
PCB-1268	< 0.2	0.2	14	mg/kg	2/5/21	11:27	2/4/21	3540C	8082A	MA
TMX (surr)	**94 %R**			%	2/5/21	11:27	2/4/21	3540C	8082A	MA
DCB (surr)	**48 %R**			%	2/5/21	11:27	2/4/21	3540C	8082A	MA

Acid clean-up was performed on the samples and associated batch QC.
Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.

LABORATORY REPORT

EAI ID#: **221858**

Client: **Nobis Group**

Client Designation: **St. Johnsbury Armory | 93203.11**

Client Sample ID:	P-2
Lab Sample ID:	221858.02
Matrix:	solid
Date Sampled:	2/3/21
Date Received:	2/3/21

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method Prep	Method Analytical	Analyst
PCB-1016	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1221	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1232	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1242	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1248	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1254	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1260	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1262	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
PCB-1268	< 1	1	59	mg/kg	2/5/21	11:36	2/4/21	3540C	8082A	MA
TMX (surr)	**41 %R**			%	2/5/21	11:36	2/4/21	3540C	8082A	MA
DCB (surr)	**32 %R**			%	2/5/21	11:36	2/4/21	3540C	8082A	MA

Acid clean-up was performed on the samples and associated batch QC.
Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.

LABORATORY REPORT

EAI ID#: **221858**

Client: **Nobis Group**

Client Designation: **St. Johnsbury Armory | 93203.11**

Client Sample ID:	P-3
Lab Sample ID:	221858.03
Matrix:	solid
Date Sampled:	2/3/21
Date Received:	2/3/21

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method Prep	Method Analytical	Analyst
PCB-1016	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1221	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1232	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1242	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1248	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1254	**7.8**	0.9	55	mg/kg	2/5/21	13:38	2/4/21	3540C	8082A	MA
PCB-1260	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1262	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
PCB-1268	< 0.09	0.09	6	mg/kg	2/5/21	11:46	2/4/21	3540C	8082A	MA
TMX (surr)	**95 %R**			%	2/5/21	11:46	2/4/21	3540C	8082A	MA
DCB (surr)	**57 %R**			%	2/5/21	11:46	2/4/21	3540C	8082A	MA

Acid clean-up was performed on the samples and associated batch QC.
Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.

LABORATORY REPORT

EAI ID#: **221858**

Client: **Nobis Group**

Client Designation: **St. Johnsbury Armory | 93203.11**

Client Sample ID:	P-4
Lab Sample ID:	221858.04
Matrix:	solid
Date Sampled:	2/3/21
Date Received:	2/3/21

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method Prep	Method Analytical	Analyst
PCB-1016	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1221	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1232	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1242	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1248	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1254	**45**	3	196	mg/kg	2/5/21	13:48	2/4/21	3540C	8082A	MA
PCB-1260	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1262	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
PCB-1268	< 0.3	0.3	20	mg/kg	2/5/21	11:56	2/4/21	3540C	8082A	MA
TMX (surr)	**73 %R**			%	2/5/21	11:56	2/4/21	3540C	8082A	MA
DCB (surr)	**53 %R**			%	2/5/21	11:56	2/4/21	3540C	8082A	MA

Acid clean-up was performed on the samples and associated batch QC.
Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.

LABORATORY REPORT

EAI ID#: **221858**

Client: **Nobis Group**
Client Designation: **St. Johnsbury Armory | 93203.11**

Client Sample ID:	P-5
Lab Sample ID:	221858.05
Matrix:	solid
Date Sampled:	2/3/21
Date Received:	2/3/21

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method Prep	Method Analytical	Analyst
PCB-1016	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1221	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1232	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1242	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1248	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1254	**22**	2	107	mg/kg	2/5/21	13:58	2/4/21	3540C	8082A	MA
PCB-1260	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1262	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
PCB-1268	< 0.4	0.4	21	mg/kg	2/5/21	12:06	2/4/21	3540C	8082A	MA
TMX (surr)	**81 %R**			%	2/5/21	12:06	2/4/21	3540C	8082A	MA
DCB (surr)	**67 %R**			%	2/5/21	12:06	2/4/21	3540C	8082A	MA

Acid clean-up was performed on the samples and associated batch QC.
Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

221858

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE/TIME	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	VOC: 524.2 BTEX 524.2 MTBE ONLY; 8260 624 VTICS; 1,4 DIOXANE; 8021 BTEX HALOS; 8015 GRO MAVPH	SVOC: 8270 625 SVTICS EDB DBCP; ABN A BN PAH; TPH8100 LI L2; 8015 DRO MAEPH; PEST 608 PEST 8081 PCB 608 (PCB 8082); OIL & GREASE 1664 TPH 1664	TCLP: TCLP 1311 ABN METALS; VOC PEST HERB	METALS: DISSOLVED METALS (LIST BELOW); TOTAL METALS (LIST BELOW)	INORGANICS: TS TSS TDS SPEC. CON.; BR CL F SO_4 NO_2 NO_3 NO_2NO_3; BOD CBOD T. ALK.; TKN NH_3 T. PHOS. O. PHOS.; pH T. RES. CHLORINE; COD PHENOLS TOC DOC; TOTAL CYANIDE TOTAL SULFIDE; REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	MICRO: TOTAL COLIFORM E. COLI FECAL COLIFORM; ENTEROCOCCI HETEROTROPHIC PLATE COUNT	OTHER	# OF CONTAINERS	NOTES MEOH VIAL #
P-1	2-3-21 1145	SO	G		X							
P-2	1220				X							
P-3	1230				X							
P-4	1240				X							
P-5	1250				X							

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER; WW-WASTE WATER So = Solid

PRESERVATIVE: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH

PROJECT MANAGER: Tim Andrews

COMPANY: NOBIS Group

ADDRESS: 18 Chenell Dr

CITY: Concord STATE: NH ZIP: 03301

PHONE: 603 224-4182 EXT.:

FAX:

E-MAIL: TAndrews@NOBIS-Group.com

SITE NAME: St. Johnsbury Armory

PROJECT #: 93203.11

STATE: NH MA ME (VT) OTHER:

REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR GWP, OIL FUND, BROWNFIELD OR OTHER:

QUOTE #: USE MOA Rates PO #:

DATE NEEDED: Standard TAT

QA/QC REPORTING LEVEL: A B C OR MA MCP

REPORTING OPTIONS: PRELIMS: YES OR NO

ELECTRONIC OPTIONS: E-MAIL PDF EQUIS EXCEL

TEMP. 3-1 °C

ICE? (YES) NO

SAMPLER(S): Josh Stewart

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
Josh Stewart	2-3-21	1620	
Foye	2/3/21	1625	
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:

METALS: 8 RCRA 13 PP FE, MN PB, CU

OTHER METALS:

SAMPLES FIELD FILTERED? ☐ YES ☐ NO

NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

SITE HISTORY:

SUSPECTED CONTAMINATION:

FIELD READINGS:

Eastern Analytical, Inc.
professional laboratory and drilling services
25 CHENELL DRIVE | CONCORD, NH 03301 | TEL: 603.228.0525 | 1.800.287.0525 | E-MAIL: CUSTOMERSERVICE@EASTERNANALYTICAL.COM | WWW.EASTERNANALYTICAL.COM

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

APPENDIX F

ENVIRONMENTAL
COMPLIANCE ASSOCIATES, LLC
Consulting and Analytical Services

AIHA MEMBER

MOLD ASSESSMENT REPORT

Former Armory Building
1249 Main Street
St. Johnsbury, Vermont

Report Prepared for:

NOBIS Group
18 Chenell Drive
Concord, New Hampshire

Assessment Date: February 2-3, 2021

217 Park Street
Morrisville, VT 05661
(802) 585-4298
info@ecaenv.com
www.ecaenv.com

TABLE OF CONTENTS

1.0 Scope of Work 3
2.0 Mold Sampling 3
2.1 Spore Trap Air Sampling & Methodology 3
2.2 Spore Trap Air Sample Data Interpretation 3
2.3 Surface Sampling 3
3.0 Assessment 4
3.1 Site Information/Complaint History 4
3.2 Visual Observations 4
3.3 Analytical Results 4
4.0 Recommendations 5
5.0 Disclaimers 6
6.0 Signature 6

1.0 Scope of Work

Environmental Compliance Associates, LLC (ECA) is pleased to provide NOBIS Group with the following mold inspection report to aid in identifying microbial hazards and facilitate remediation efforts at the former Armory Building located at 1249 Main Street in St. Johnsbury, Vermont. The building is a 5,600 square foot building that is planned for future renovation/occupancy.

The mold inspection was conducted by Christopher Clement, a Council-certified Microbial Consultant (CMC) and microbial laboratory analyst (#1509006).

2.0 Mold Sampling

2.1 Spore Trap Air Sampling & Methodology

The air samples were collected onto Micro5™ spore trap cassettes. The samples were collected using high flow sampling pumps. In general, air is sampled at a rate of 5 liters per minute (lpm) through the Micro5™ cassettes for 5 minutes, totaling 25 liters. Upon receipt by the laboratory, the slide is removed from the cassette for the enumeration and identification of fungal spores. The deposition trace is analyzed at 400-800X magnification using Kohler Illumination.

Spore traps provide a snapshot in time of the air quality in an indoor environment. This helps in determining how widespread mold is and to assess the health risk to building occupants, as mold typically generates allergic responses when particles and spores are inhaled.

2.2 Spore Trap Air Sample Data Interpretation

Because of the ubiquity of fungi, samples collected from suspect areas need to be evaluated against samples collected from the outdoors and non-suspect areas for comparison. In general, the genus of fungi collected from the indoor air should be like those found outdoors and should contain similar concentrations. Significantly higher concentrations of fungi of different genera can indicate a mold problem in the indoor environment.

2.3 Surface Sampling

Surface samples are typically collected in various areas throughout the building. These samples are collected by adhering a strip of clean, invisible tape directly to a surface/substrate and mounting it on a standard microscope slide for direct microscopic examination. Surface samples are helpful in determining what types of mold are present, whether growth is occurring on seemingly clean surfaces, and the extent of contamination of interior substrates.

3.0 Assessment

The mold assessment consisted of conducting a visual inspection throughout the interior and exterior of the building. Additionally, sampling was performed to collect analytical data. Neither the inspection, nor analytical results should be relied upon solely, but both are assessment tools utilized to help the inspector draw sound conclusions and make appropriate recommendations.

3.1 Site Information/Complaint History

The building is a 5,600 square foot brick structure consisting of a full basement level, a first floor and second floor. The building was constructed in 1916 and was originally used as an armory and housing for service members. In recent years, the building has remained vacant and unconditioned, allowing vast fluctuations in temperature and humidity. The building has experienced several roof leaks and water damage/water intrusion events over the years. Animals have nested in the building including rodents and pigeons; and large amounts of mold growth have proliferated over time, resulting in various biological hazards that will need to be mitigated before the building can be safely occupied.

3.2 Visual Observations

A thorough visual inspection was conducted throughout the building. Heavy water-damaged building materials were observed throughout the building. Past roof leaks have resulted in significant amounts of ceiling board and flooring material in the gym and main lobby to be heavily water damaged. Additionally, fluctuations in temperature and humidity have allowed heavy visible mold growth to proliferate on virtually all surfaces throughout the building. The basement level has very thick mushroom growths on the walls which takes a very large amount of moisture over a long period of time to occur. This is rarely seen in indoor environments. Rodent nesting/scat was observed in various areas throughout the building, as well as pigeon droppings and even dead pigeons/animals were found during the assessment. The building is heavily contaminated with mold/fungi, but bacteria, and viral particles should also be of concern based on the varying biological hazards present. Mold is a concern, but Hantavirus, histoplasmosis, *E. coli* and various other pathogens should be considered as biohazards as well.

3.3 Analytical Results

All air samples collected throughout the building were found to contain extremely high concentrations of airborne mold spores, atypical of healthy indoor environments. It is not advisable for persons to enter this building without respiratory protection, disposable suits, eye protection and gloves.

All surface samples collected were found to contain HEAVY concentrations of mold growth and contamination. This suggests widespread contamination throughout the building and reaffirms that all surfaces within the building will need to receive microbial decontamination/cleaning efforts.

4.0 Recommendations

1) Once all other regulated hazards have been removed from the building (i.e. asbestos, lead, PCB's, etc.) mold/bioremediation should be considered. This will require removal of all affected building materials throughout the building. This will likely require a complete removal of building materials down to the framing and original structure of the building. This will entail extensive removal of building materials. The owner should be privy to all decisions regarding removal of building materials. If any hazardous materials remain in the building, contractors should be briefed on its location and potential hazard in accordance with (V)OSHA HazCom regulation.

2) Once all affected building materials/items have been removed from the building, the building will require drying of materials utilizing LGR's to ensure excess moisture/humidity is removed from the structure. Once dried, HEPA filtered negative air machines should be installed in the basement of the building to draw air from the top floors, down through the basement and exhausted to the outdoors. There should be enough negative air machines in place to ensure a minimum of four (4) air exchanges per hour. This is imperative for removing mold spores from the building and preventing resettling/recontamination of mold spores on surfaces.

3) Cleaning operations should be performed in a top-down approach. This project is quite large and depending on the ability of the restoration company chosen, this may need to be broken into various phases. Cleaning should be performed on all surfaces utilizing the HEPA sandwich method. This is a succession of HEPA vacuuming, followed by thorough cleaning of surfaces utilizing a disinfectant solution, followed by a final HEPA vacuuming once surfaces have dried. It is imperative that all surfaces be thoroughly cleaned, as the level of contamination present is high enough where post-remediation air samples may fail if all surfaces are not thoroughly cleaned.

4) Once mold/bioremediation has been thoroughly performed, areas should be prepared for final visual inspections and air sampling. For a visual inspection to pass, all surfaces must be thoroughly cleaned from mold growth and any dirt, dust or debris. Air samples must be similar to outdoor types and concentrations in order to be deemed "clean."

5) In the future, it will be imperative to monitor and control temperature and humidity within the building. If this is not addressed by means of mechanical dehumidification and repair of water intrusion (i.e. roof leaks), mold will return. In general, relative humidity should be maintained below 50% year-round to inhibit mold growth/activity.

NOTE: It is important to ensure cleaning/disinfectant solutions are rated for broad spectrums of pathogens. This will ensure that cleaning/disinfecting will be effective against most pathogens within the building.

5.0 Disclaimers

It must be emphasized that the air sampling events represent a small snapshot in time on the day the samples were collected. Results can change dramatically as environmental conditions change, such as the weather or water episodes (floods, leaks, moisture intrusion, high relative humidity, etc.).

Once investigative work is underway, the requirements of the project may change based on findings that were inaccessible to the investigator at the time of the assessment. The remediation contractor is responsible for gearing the scope of the project and implementing appropriate engineering controls and work practices during the course of the project.

This mold report offers general guidelines and recommendations based on the assessment and experience of the Microbial Consultant. This is not intended to be a job-specific work plan. The work plan ensuring proper cleaning and successful remediation shall be the responsibility of the mold remediation contractor.

6.0 Signature

Dear NOBIS Group,

Thank you for choosing ECA, LLC to help you with your project. We are dedicated to quality customer service and satisfaction. If you have any questions regarding this report, or need additional environmental services in the future, please do not hesitate to contact me.

Best regards,



Christopher O. Clement, CMC, CIH
Environmental Compliance Associates, LLC

ENVIRONMENTAL COMPLIANCE ASSOCIATES, LLC
Consulting and Analytical Services

217 Park Street
Morrisville, Vermont 05661
(802) 585-4298
www.ecaenv.com

Customer: Nobis Group
Project Name: St. Johnsbury Armory - St. Johnsbury, Vermont
ECA Project #: 21035
Date Received: 02/02/21
Date Analyzed: 02/17/21

Micro5 MicroCell / Spore Trap Air Sample Analysis

		Lab ID Number	211161			211162			211163			211164			211165		
		Sample ID # & Location	2606118 - First level - gymnasium			2606127 - First level - kitchen/bar area			2606099 - First level - southeast room			2606129 - Second level - northeast room			2606119 - Second level - large foyer		
		Air Volume	25 liters			25 liters			25 liters			25 liters			25 liters		
		Limit of Detection	0.4			0.4			0.4			0.4			0.4		
		Background Debris Scale	2			2.5			3			3			3		
			Raw Count	Count/m³	%	Raw Count	Count/m³	%	Raw Count	Count/m³	%						
		Total Fungal Spore Count	62	2,480	100	91	3,640	100	55	2,200	100	97	3,880	100	40	1,600	100
Type I		Ascospores															
		Basidiospores										1	40	1%			
		C. herbarum (outdoor type)															
		Coprinas (basidiospore)															
		Ganoderma (basidiospore)															
		Pithomyces															
		Myxomycetes/Periconia/Smuts															
		Rusts															
		Spegazzini															
Type II		***Aspergillus/Penicillium* like**	42	**1680**	68%	65	**2600**	71%	37	**1480**	67%	57	**2280**	59%	32	**1280**	80%
		Basidiospore Type II	20	**800**	32%	26	**1040**	29%	18	**720**	33%	39	**1560**	40%	8	320	20%
		Chaetomium globosum															
		Cladosporium cladosporioides															
		Cladosporium spp.															
		Stachybotrys															
		Ulocladium like															
		Trichoderma															
Type III		*Alternaria*															
		Bipolaris/Drechslera															
		Curvularia															
		Epicoccum															
		Septonema- like															
		Pithomyces															
		Unidentified Fungi															
		Spore chains/clusters		2			2			1			None			None	

Note: Numeric values above in bold red print indicates elevated and/or "risky type" indoor airborne mold spore concentrations

Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors
Type II - "Risky"molds associated with indoor moisture problems (when indoor levels are significantly higher than background levels)
Type III - Others - It is common to find a few of these mold spores in the outdoor and indoor air

ENVIRONMENTAL COMPLIANCE ASSOCIATES, LLC
Consulting and Analytical Services

217 Park Street
Morrisville, Vermont 05661
(802) 585-4298
www.ecaenv.com

Customer: Nobis Group
Project Name: St. Johnsbury Armory - St. Johnsbury, Vermont
ECA Project #: 21035
Date Received: 02/02/21
Date Analyzed: 02/17/21

Micro5 MicroCell / Spore Trap Air Sample Analysis

		Lab ID Number	211166			211167			211168			211169			211170		
		Sample ID # & Location	2606139 - Second level - southwest room			2606140 - Basement - southeast bathroom			2606130 - Basement - north central corridor			2606120 - Basement - southwest hall			2606109 - Outdoors		
		Air Volume	25 liters			25 liters			25 liters			25 liters			25 liters		
		Limit of Detection	0.4			0.4			0.4			0.4			0.4		
		Background Debris Scale	2			2			2			2			2		
			Raw Count	Count/m³	%	Raw Count	Count/m³	%	Raw Count	Count/m³	%	Raw Count	Count/m³	%	Raw Count	Count/m³	%
		Total Fungal Spore Count	96	3,840	100	419	16,760	100	208	8,320	100	67	2,680	100	12	480	100
Type I		Ascospores															
		Basidiospores	1	40	1%							7	280	10%	8	320	67%
		C. herbarum (outdoor type)															
		Coprinas (basidiospore)															
		Ganoderma (basidiospore)															
		Pithomyces															
		Myxomycetes/Periconia/Smuts															
		Rusts															
		Spegazzini															
Type II		***Aspergillus/Penicillium* like**	75	**3000**	78%	176	**7040**	42%	126	**5040**	61%	17	**680**	25%	2	80	17%
		Basidiospore Type II	20	**800**	21%	237	**9480**	57%	68	**2720**	33%	39	**1560**	58%	2	80	17%
		Chaetomium globosum				2	80	0.5%	4	160	2%						
		Cladosporium cladosporioides				4	160	1%	10	400	5%	4	160	6%			
		Cladosporium spp.															
		Ulocladium like															
		Trichoderma															
		Mold Fragments															
Type III		*Alternaria*															
		Bipolaris/Drechslera															
		Curvularia															
		Epicoccum															
		Septonema- like															
		Pithomyces															
		Unidentified Fungi															
		Spore chains/clusters		None			**9**			**4**			**3**			None	

Note: Numeric values above in bold red print indicates elevated and/or "risky type" indoor airborne mold spore concentrations

Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors

Type II - "Risky"molds associated with indoor moisture problems (when indoor levels are significantly higher than background levels)

Type III - Others - It is common to find a few of these mold spores in the outdoor and indoor air

ENVIRONMENTAL COMPLIANCE ASSOCIATES, LLC
Consulting and Analytical Services

217 Park Street
Morrisville, Vermont 05661
(802) 585-4298
www.ecaenv.com

Customer: Nobis Group
Project Name: St. Johnsbury Armory - St. Johnsbury, Vermont
ECA Project #: 21035
Date Received: 02/02/21
Date Analyzed: 02/17/21

Tape-lift Surface Samples

	Lab ID Number	211171	211172	211173	211174	211175
	Sample ID # & Location	SJ1 - General dust - first level gymnasium	SJ2 - General dust - first level foyer	SJ3 - General dust - second level foyer	SJ4 - General dust - second level - northwest room	SJ5 - General dust - northeast basement corridor
Type I	Ascospores					
	Basidiospores					
	C. herbarum (outdoor type)					
	Coprinas (basidiospore)					
	Ganoderma (basidiospore)					
	Polythrincium					
	Myxomycetes/Periconia/Smuts					
	Rusts					
Type II	***Aspergillus/Penicillium* like**	**HEAVY Concentrations**	**Moderate Concentration**	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**
	Basidiospore Type II	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**
	Chaetomium globosum		**HEAVY Concentrations**			
	Cladosporium cladosporioides	**HEAVY Concentrations**	**Moderate Concentration**		**HEAVY Concentrations**	
	Cladosporium sphaerospermum					
	Stachybotrys				**HEAVY Concentrations**	
	Ulocladium like					
	Trichoderma					
Type III	*Alternaria*					
	Bipolaris/Drechslera					
	Curvularia					
	Epicoccum					
	Septonema- like					
	Pithomyces					
	Unidentified Fungi					

Note: Numeric values above in bold red print indicates elevated and/or "risky type" indoor airborne mold spore concentrations

Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors
Type II - "Risky"molds associated with indoor moisture problems (when indoor levels are significantly higher than background levels)
Type III - Others - It is common to find a few of these mold spores in the outdoor and indoor air

ENVIRONMENTAL COMPLIANCE ASSOCIATES, LLC
Consulting and Analytical Services

217 Park Street
Morrisville, Vermont 05661
(802) 585-4298
www.ecaenv.com

Customer: Nobis Group
Project Name: St. Johnsbury Armory - St. Johnsbury, Vermont
ECA Project #: 21035
Date Received: 02/02/21
Date Analyzed: 02/17/21

Tape-lift Surface Samples

	Lab ID Number	211176	211177	211178	211179	211180
	Sample ID # & Location	SJ6 - General dust - far basement corridor	SJ7 - Mushrooms on wall - basement shower room	SJ8 - General dust - southwest basement corridor	SJ9 - Floor surface - first level gymnasium	SJ10 - Foyer floor - first level
Type I	Ascospores					
	Basidiospores					
	C. herbarum (outdoor type)					
	Coprinas (basidiospore)					
	Ganoderma (basidiospore)					
	Polythrincium					
	Myxomycetes/Periconia/Smuts					
	Rusts					
Type II	***Aspergillus/Penicillium* like**	**HEAVY Concentrations**		**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**
	Basidiospore Type II	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**	**HEAVY Concentrations**
	Chaetomium globosum					
	Cladosporium cladosporioides				**HEAVY Concentrations**	
	Cladosporium sphaerospermum					
	Stachybotrys					
	Ulocladium like					
	Trichoderma					
Type III	*Alternaria*					
	Bipolaris/Drechslera					
	Curvularia					
	Epicoccum					
	Septonema- like					
	Pithomyces					
	Unidentified Fungi					

Note: Numeric values above in bold red print indicates elevated and/or "risky type" indoor airborne mold spore concentrations

Type I - Dominant outdoor molds that migrate into all indoor environments, but very rarely grow indoors
Type II - "Risky"molds associated with indoor moisture problems (when indoor levels are significantly higher than background levels)
Type III - Others - It is common to find a few of these mold spores in the outdoor and indoor air

Mold Sample Chain of Custody Form

For Non-Viable Direct Microscopic Analysis

Client: Nobis | Telephone #: | Project Name: St Johnsbury Armory

Address: | Email #: | Location:

Contact Person: | Date Sampled: 2/2/21

LAB ID # (Lab use only)	Sample #	Sample Type	Air volume (Total liters)	Sample Location	Time	CO	CO_2	tVOC	°F	RH
24461	2600118	Micro5	25	1st level - Gymnasium						
162	2600127	↓	↓	↓ - Kitchen/Bar Area						
163	2600099			↓ - SE Room						
164	2600129			2nd level - NE Room						
165	2600119			↓ - Large Foyer						
166	2600139			↓ - SW Room						
167	2600140			Basement - SE Bathroom						
168	2600130			↓ - N. central Corridor						
169	2600120			↓ - SW Hall						
170	2600109	↓	↓	Outdoors						

Submitted by: [signature]
Signature
Date: 2/2/21

Received by: [signature]
Signature
Date: 2/17/21

Processed by (Lab use only): [signature]
Signature
Date: 2/17/21

Mold Sample Chain of Custody Form

For Non-Viable Direct Microscopic Analysis

Client: Nobis
Address:
Telephone #:
Email #:
Contact Person:
Project Name: St J. Armory
Location:
Date Sampled: 2/3/21

LAB ID # (Lab use only)	Sample #	Sample Type	Air volume (Total liters)	Sample Location	Time	CO	CO_2	tVOC	°F	RH
211171	SJ1	Micro5	25	Gym dust - 1st level Gymnasium						
172	2			- 1st level Foyer						
173	3			- 2nd level Foyer						
174	4			2nd level - NW Room						
175	5			Basement - NE corridor General dust						
176	6			Basement - Four most corridor General dust						
177	7			Mushrooms on wall - basement Shower Room						
178	8			Basement - SW corridor General dust						
179	9			1st level Gymnasium - floor surface						
180	10			1st level - Foyer floor						

Submitted by:
Signature
Date: 2/3/21

Received by:
Signature
Date: 2/12/21

Processed by (Lab use only):
Signature
Date: 2/17/21

McCRONE RESEARCH INSTITUTE

certifies that

Christopher Clement

has successfully completed an intensive course of instruction in

Indoor Air Quality: Fungal Spore Identification

given by the McCrone Research Institute

Presented this 20th day of April, 2012

Course Date: April 16-20, 2012

American Council for Accredited Certification

hereby certifies that

Christopher O. Clement

has met all the specific standards and qualifications of the re-certification process, including continued professional development, and is hereby re-certified as a

CMC

Council-certified Microbial Consultant

This certificate expires on September 30, 2021

Charles F. Wiles, Executive Director

1509006

Certificate Number

This certificate remains the property of the American Council for Accredited Certification.

ABIH®

american board of industrial hygiene®

organized to improve the practice of industrial hygiene
proclaims that

Christopher Owen Clement

having met all requirements of
education, experience and examination,
is hereby certified in the

COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH



Certificate Number	**11562 CP**
Awarded:	**May 25, 2018**
Expiration Date:	**December 1, 2023**

Chair, ABIH

Chief Executive Officer, ABIH

APPENDIX G

APPENDIX G – ADDITIONAL LIMITATIONS

1) This hazardous materials survey was performed in accordance with generally accepted practices of other consultants undertaking similar work at the same time and in the same geographical area. The results of this survey are based on our professional judgment and are not scientific certainties. Specifically, KGSNE JV, LLC (KGSNE) does not and cannot represent that the site contains no hazardous materials or other latent conditions beyond those observed during this inspection. No other warranty, express or implied, is made.

2) The observations and conclusions presented in this report were made solely on the basis of conditions described thereon and not on scientific tasks or procedures beyond the scope of described services or the budgetary, time, and work constraints (i.e. restricted demolition/sampling) imposed by the client. The work described in this report was performed in accordance with the terms and conditions described in our agreement, and subsequent discussions in the field with facilities personnel.

3) During the Site inspection, observations were made of the site building. Where access to portions of the site building were unavailable, limited, or unsafe, KGSNE renders no opinion as to the presence of asbestos, lead, or other hazardous materials in those portions of the site.

4) No property boundary, site feature or topographic surveys of the site were performed by KGSNE.

5) Our services did not include assessments for the presence of pesticides, herbicides, urea-formaldehydes, or radon, nor any air quality monitoring, or any chemical analyses of soil, surface water, groundwater, or any other materials at the site beyond which is included in the report.

6) The purpose of this report was to inspect limited portions of the site building for the presence of suspect asbestos-containing materials, lead based paint, and PCB in bulk products within the context of applicable Occupational Safety and Health Administration (OSHA), USEPA (EPA), and the Vermont Department of Health regulations. This report does not in any manner or form constitute a Management Plan or Abatement Design within the context of OSHA, EPA, or Vermont Health regulations. No attempt was made to check the compliance of present or past owners of the site with federal, state, or local laws.

APPENDIX H

February 26, 2021
Nobis File No. 93203.11

U.S. Environmental Protection Agency, Region I
Attn: Mr. James Byrne
5 Post Office Square
Suite 100, Mailcode OSRR07-4
Boston, MA 02109-3912

Re: Laboratory Report
Eastern Analytical, Inc ID: 221858
Eastern Analytical, Inc., Concord, NH
St. Johnsbury Armory
St. Johnsbury, VT

Tier 1 Plus Organic Data Review

PCBs
5/PCB Samples: P-1, P-2, P-3, P-4, P-5

Dear Mr. Byrne:

Nobis Group® performed a Tier 1 Plus data review on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory located in St. Johnsbury, Vermont. The samples were analyzed by Eastern Analytical, Inc. under the subcontract with Nobis.

The Tier 1 Plus data review was performed in accordance with the EPA New England Environmental Data Review Supplement for Regional Data Review Elements and Superfund Specific Guidance/Procedures (June 2018); USEPA's Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (January 2017); and the Site-Specific Quality Assurance Project Plan Addendum (SSQAPPA) for the Former St. Johnsbury Armory Site (September 2020).

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Initial and Continuing Calibrations
*	• Blanks
NA	• Matrix Spike Analysis
NA	• Laboratory Duplicates
*	• Laboratory Control Samples (LCS)
NA	• Field Duplicates
*	• Surrogate Compounds
NA	• Performance Evaluation (PE) Samples

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

* • Reported Quantitation Limits

* All criteria were met for this parameter.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues
The objective of the building material sample collection was to the presence/absence of PCBs in building materials and their respective concentrations for the purposes of evaluating potential renovation costs.

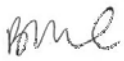
The data meet the project quality criteria and can be used without restriction. The attachments provide details and supporting documentation.

PCBs:
None of the analytical results were qualified and are considered to be acceptable for use without restriction.

Please contact Bridget Fortier at (978) 399-9651 or bfortier@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®



Bridget Fortier, E.I.T.
Data Validator

Tables: Data Summary Tables – Tier 1 Plus
Data Qualification Actions Table

Appendix A: Data Review Checklist

TABLES

Data Summary Table
Former St. Johnsbury Armory
St. Johnsbury, VT
1 of 2

Fraction	Lab Sample	Sample Name	Chemical Name	Result Value	Validator Qualifier	Reason Code	Result Units	Sample Data	Analyze Date	Analyze Time
PCBs	221858.01	P-1	Aroclor-1016	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1221	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1232	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1242	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1248	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1254	4.4			mg/kg	2/3/2021	2/5/2021	13:28
PCBs	221858.01	P-1	Aroclor-1260	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1262	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Aroclor-1268	0.2	U		mg/kg	2/3/2021	2/5/2021	11:27
PCBs	221858.01	P-1	Total PCBs	4.4			mg/kg	2/3/2021	N/A	N/A
PCBs	221858.02	P-2	Aroclor-1016	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1221	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1232	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1242	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1248	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1254	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1260	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1262	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Aroclor-1268	1	U		mg/kg	2/3/2021	2/5/2021	11:36
PCBs	221858.02	P-2	Total PCBs	0			mg/kg	2/3/2021	N/A	N/A
PCBs	221858.03	P-3	Aroclor-1016	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1221	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1232	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1242	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1248	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1254	7.8			mg/kg	2/3/2021	2/5/2021	13:38
PCBs	221858.03	P-3	Aroclor-1260	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1262	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Aroclor-1268	0.09	U		mg/kg	2/3/2021	2/5/2021	11:46
PCBs	221858.03	P-3	Total PCBs	7.8			mg/kg	2/3/2021	N/A	N/A

Data Summary Table
Former St. Johnsbury Armory
St. Johnsbury, VT
2 of 2

Fraction	Lab Sample	Sample Name	Chemical Name	Result Value	Validator Qualifier	Reason Code	Result Units	Sample Data	Analyze Date	Analyze Time
PCBs	221858.04	P-4	Aroclor-1016	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1221	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1232	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1242	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1248	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1254	45			mg/kg	2/3/2021	2/5/2021	13:48
PCBs	221858.04	P-4	Aroclor-1260	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1262	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Aroclor-1268	0.3	U		mg/kg	2/3/2021	2/5/2021	11:56
PCBs	221858.04	P-4	Total PCBs	45			mg/kg	2/3/2021	N/A	N/A
PCBs	221858.05	P-5	Aroclor-1016	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1221	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1232	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1242	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1248	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1254	22			mg/kg	2/3/2021	2/5/2021	13:58
PCBs	221858.05	P-5	Aroclor-1260	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1262	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221858.05	P-5	Aroclor-1268	0.4	U		mg/kg	2/3/2021	2/5/2021	12:06
PCBs	221859.05	P-5	Total PCBs	22			mg/kg	2/3/2021	N/A	N/A

Notes:
mg/kg - Milligram per kilogram
U – Substance was analyzed for, but not detected. Reporting limit is presented.

Quality Control Action Summary
Former St. Johnsbury Armory
St. Johnsbury, VT

PCBs	Quality Control Concern	Action
-	-	-

APPENDIX A

Generic Data Review Checklist

Project: St. Johnsbury Armory, St. Johnsbury VT
Project #: 93203.11
Case#: 221858
Date: 2/25/2020
Methods: Polychlorinated Biphenyls by Gas Chromatography
Laboratory: Eastern Analytical Inc.
SDG: --
Reviewer: Bridget Fortier

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review):**
   All requested analyses were provided. The analyte lists were complete. – No Action

2. **Holding Time and Sample Preservation Compliance:**
   All samples were received and tested within the appropriate holding times. All the samples were shipped and stored with the appropriate preservation. – No Action

3. **Lab and Field Blanks**
   No laboratory blank samples were collected for this project. – No Action
   No field blanks were collected for this project. – No Action

4. **Laboratory Control Samples**
   No LCS were taken for this project. – No Action

5. **Field Duplicate Precision**
   No field duplicates were collected for this project. – No Action

6. **Laboratory Duplicate Precision**
   No Laboratory Duplicates were collected for this project. – No Action

7. **Matrix Spikes**
   No Matrix Spikes were collected for this project. – No Action

8. **Surrogate Spikes**
   Surrogate spikes recoveries all within limits. – No Action

9. **Internal Standards**
   Internal standards data was not included in the laboratory report. – No Action

10. **Performance Evaluation Samples**
    No performance evaluation samples were submitted for this project. – No Action

11. **Reporting Limits**
    The reporting limits for these samples were below the project action limits. – No Action

12. Calibration Issues

There were no calibration issues. – No Action

13. Other

There were no other concerns for this project.

Appendix C – Targeted Brownfields Assessment
Hazardous Building Materials Assessment

TARGETED BROWNFIELDS ASSESSMENT
HAZARDOUS BUILDING MATERIALS ASSESSMENT

ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

Prepared For:
U.S. Environmental Protection Agency (EPA)
Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

EPA CONTRACT NO. EP-S1-17-01
TASK ORDER NO. 68HE0119F0009

Submitted By:
KGSNE JV, LLC
293 Boston Post Road, West, Suite 100
Marlborough, MA 01752

Submittal Date: January 10, 2024

EPA Region I
Reviewed and Approved:

Christine Beling
Contracting Officer's Representative (COR)

Date

Region I START
Reviewed and Approved:



Bridget Fortier, EIT
Project Engineer

1/10/2024
Date



Clarence "Tim" Andrews, PG
Senior Project Manager

1/10/2024
Date

TABLE OF CONTENTS
TARGETED BROWNFIELDS ASSESSMENT
HAZARDOUS BUILDING MATERIALS ASSESSMENT
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

EXECUTIVE SUMMARY 1

1.0 INTRODUCTION 2
- 1.1 Project Objectives 2
- 1.2 Site Background 2
  - 1.2.1 Site Location and Description 2
- 1.3 Previous Investigations 3

2.0 TBA INVESTIGATION ACTIVITIES 3
- 2.1 PCB Paints and Coatings 4
- 2.2 Lead Based Paint 4
- 2.3 Asbestos Containing Materials 5
- 2.4 PCB Bulk Material Sampling 6
- 2.5 Sub-Slab Sampling 6
- 2.6 Exterior Soil Sampling 7

3.0 DATA USABILITY AND VALIDATION 8

4.0 SUMMARY OF TBA SAMPLING RESULTS 8
- 4.1 PCB Paints and Coatings 8
- 4.2 Lead Based Paint 9
- 4.3 Asbestos Containing Materials 9
- 4.4 PCB Bulk Materials 10
- 4.5 Sub Slab Sampling 10
- 4.6 Exterior Soil Sampling 10

5.0 CONCLUSIONS 11

6.0 REFERENCES 12

TABLES

NUMBER

2-1 PCB Paints and Coatings Sample Results
2-2 Lead Waste Characterization Sample Results
2-3 Asbestos Sample Results
2-4 PCB Bulk Material Sample Results
2-5 PCB Soil Sample Results

TABLE OF CONTENTS
TARGETED BROWNFIELDS ASSESSMENT
HAZARDOUS BUILDING MATERIALS ASSESSMENT
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

FIGURES

NUMBER

1-1 Site Locus
2-1a PCB Paints & Coatings and Lead Composite Samples– Second Floor
2-1b PCB Paints & Coatings and Lead Composite Samples – First Floor
2-1c PCB Paints & Coatings and Lead Composite Samples– Basement
2-1d PCB Paints & Coatings and Lead Composite Samples – Exterior and Roof
2-2a Asbestos and Bulk PCB Material Samples – Second Floor
2-2b Asbestos and Bulk PCB Material Samples– First Floor
2-2c Asbestos and Bulk PCB Material Samples – Basement
2-2d Asbestos and Bulk PCB Material Samples – Exterior and Roof
2-3 PCB Soil Sample Locations

APPENDICES

NUMBER

A KD Associates Report
B Laboratory Analytical Reports
C Soil Boring Logs
D Data Validation Reports

EXECUTIVE SUMMARY

KGSNE JV II, LLC (KGSNE) has completed a Targeted Brownfields Assessment (TBA) at the St. Johnsbury Armory located at 1249 Main Street, St Johnsbury, Vermont (the Site) for the U.S. Environmental Protection Agency (EPA) under Contract No. 68HE0122D0001, Task Order No. 68HE0122F0044, Site No. 68HE0122F0044-13. TBA activities were performed to address data gaps identified by Atlas Technical Consultants (Atlas). The supplemental data will be used by the Town of St. Johnsbury and its contractor Montrose Environmental Group Inc. (Montrose) to further define the distribution of hazardous materials in support of cleanup planning and materials abatement for future building renovation and reuse or demolition and disposal.

The Former Armory building is a 2-story 5,600 (+/-) square foot building that was constructed in 1916. The building has served as an armory, gymnasium, and meeting house throughout its history. The building has remained vacant and unused for several years, leading to extensive mold growth and damage to various building materials.

On March 20, 2023, Atlas developed a Workplan for Additional Hazardous Building Materials Sampling (Atlas, 2023; the workplan). This plan was developed based on the previous assessments, and called for additional polychlorinated biphenyl (PCB) and asbestos sampling, as well as sub-slab soil sampling and lead waste characterization sampling. This workplan was the basis of sampling for this TBA investigation.

KGSNE performed TBA field investigation activities between August and December 2023. KGSNE oversaw the completion of the Phase I hazardous building material survey on August 14 through 16, 2023 that included the collection of asbestos containing materials and polychlorinated biphenyls (PCB) paints and coatings. KGSNE collected sub-slab soil samples on August 17, 2023. On October 2, 2023 KD Associates returned to the Site to collect bulk building material samples for PCBs. Additional building materials were sampled by KGSNE on December 3, 2023.

Phase II began on October 25, 2023. KD Associates sampled various paint locations for waste characterization, as well as additional building material samples where high PCB paint concentrations were found from Phase I. On November 1 and 2, 2023, KGSNE collected soil samples from 24 locations next to high PCB paint locations in order to confirm and delineate PCB migration into the subsurface.

1.0 INTRODUCTION

KGSNE JV II, LLC (KGSNE) has completed a Targeted Brownfields Assessment (TBA) at the St. Johnsbury Armory located at 1249 Main Street, St Johnsbury, Vermont (the Site) for the U.S. Environmental Protection Agency (EPA) under Contract No. 68HE0122D0001, Task Order No. 68HE0122F0044, Site No. 68HE0122F0044-13. Work was performed in general accordance with the procedures and quality control measures detailed in the Program Quality Assurance Project Plan (Program QAPP) prepared by KGSNE and approved by EPA on October 27, 2022 (KGSNE 2022), the Quality Assurance Project Plan Addendum (QAPPA) prepared by KGSNE (KGSNE 2023a), and the QAPPA Update prepared by KGSNE (KGSNE 2023b). This report presents the findings of the TBA field investigation activities conducted by KGSNE between August and December 2023. A Site Locus Map is included as Figure 1-1.

1.1 Project Objectives

The overall objective of the TBA is to perform a supplemental hazardous building material survey (HBMS) at the Site to address data gaps identified by Atlas Technical Consultants (Atlas). The supplemental data will be used by the Town of St. Johnsbury and its contractor Montrose Environmental Group Inc. (Montrose) to further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal. Other common HBM were delineated in previous investigations. TBA activities were split into two phases. Phase I consisted of collection of suspected asbestos containing materials (ACMs), and multi-media samples suspected of containing polychlorinated biphenyls (PCBs) including bulk building materials, paints, and sub-slab soils. Phase II, which was based on the results of Phase I, consisted of lead-based paint samples for waste characterization, further building material sampling for PCBs, and soil sampling for PCBs.

1.2 Site Background

This section describes the physical characteristics of the Site as well as the environmental history of the Site.

1.2.1 Site Location and Description

The Former Armory building is a 2-story 5,600 (+/-) square foot building that was constructed in 1916. The building has served as an armory, gymnasium, and meeting house throughout its history. The building has remained vacant and unused for several years, leading to extensive mold growth and damage to various building materials.

1.3 Previous Investigations

There have been four previous Site investigations:

Limited Interior Asbestos Inspection – Crothers Environmental Group LLC, November 1, 2008: This assessment was an initial building materials survey for asbestos.

Environmental Survey – Cardno ATC, March 28, 2013: This assessment included inventory and sampling of asbestos, PCBs, lead-based paint, lead dust, mold testing, and a floor drain investigation.

PCB Building Material Survey – ATC Group Services LLC, March 3, 2017: This assessment included additional PCB sampling of building materials, indoor air, and the concrete floor slab.

Targeted Brownfields Assessment Report – KGSNE, LLC, March 29, 2021: This assessment included additional PCB and asbestos sampling, lead paint testing, a regulated/universal waste survey, and mold survey and sampling.

On March 20, 2023, Atlas developed a Workplan for Additional Hazardous Building Materials Sampling (Atlas, 2023). This plan was developed based on the previous assessments, and called for additional PCB and asbestos sampling, as well as sub-slab soil sampling and lead waste characterization sampling. This workplan was the basis of sampling for this TBA investigation.

2.0 TBA INVESTIGATION ACTIVITIES

KGSNE performed TBA field investigation activities between August and December 2023, in general accordance with the QAPPA (KGSNE, 2023a) and QAPPA Update (KGSNE, 2023b). KGSNE oversaw the completion of the Phase I HBMS on August 14 through 16, 2023 that included the collection of ACM and PCB paints and coatings. KGSNE collected sub-slab soil samples on August 17, 2023. On October 2, 2023 KD Associates returned to the Site to collect bulk building material samples for PCBs. Additional building materials were sampled by KGSNE on December 3, 2023 to replace samples that could not be analyzed initially due to matrix interference issues. A copy of KD Associates' report summarizing findings from Phase I is included as Appendix A.

Phase II began on October 25, 2023. KD Associates sampled various paint locations for waste characterization, as well as additional building material samples where high PCB paint concentrations were found from Phase I. On November 1 and 2, 2023, KGSNE collected soil samples from 24 locations next to high PCB paint locations in order to confirm and delineate PCB migration into the subsurface.

2.1 PCB Paints and Coatings

From August 14 through 18, 2023 KGSNE mobilized to the Site with KD Associates to sample PCB paints and coatings for Phase I throughout the interior and exterior of the building. Samples were collected from pre-determined locations identified by the Atlas workplan and as directed by Montrose. Several materials listed for sampling in the workplan were determined by KGSNE, Montrose, and KD Associates to not exist (such as doors or underlying plasters) and were not sampled. Four additional samples of Celotex board in the gym which were not originally identified were sampled. On October 18, 2023 KD Associates returned to the Site to collect samples from suspect substrate materials or materials subject to potential leaching of PCBs, particularly concrete window sashes. On December 4, 2023 KGSNE returned to the Site to collect subsequent samples.

The following is a breakdown of the samples collected from each area of the building:

Location	Total PCB Paints/Coating Samples Collected
Second Floor	48
First Floor	94
Basement	96
Exterior	40

Paint and coating samples were collected using tools and scrapers that were decontaminated with a diluted hexane spray and deionized water between locations. KGSNE confirmed with the laboratory that only 2 grams of material were needed for analysis but attempted to collect 10 grams of material where possible. Samples were weighed in the field to ensure proper sample volume.

Samples were transmitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts and were analyzed for PCBs using Method 8082 with Soxhlet Extraction. Sample information and results are listed in Table 2-1 and shown on Figures 2-1a, 2-1b, 2-1c, and 2-1d. Laboratory reports are included in Appendix B.

2.2 Lead Based Paint

Based on results from Phase I, Montrose provided instructions on sample collection requirements for Phase II sampling. On October 25, 2023 KD Associates collected five composite samples for lead waste characterization as part of Phase II. Each composite sample consisted of lead paint from five locations that were chosen by Montrose based on the PCB and asbestos results to

accurately characterize the lead concentrations in the different waste streams. Lead paint samples were collected using hand tools and scrapers that were decontaminated between locations.

Waste characterization samples were transmitted under a chain-of-custody to Pace. Samples were analyzed for toxic characteristic leaching procedure (TCLP) lead. Sample locations and results are listed in Table 2-2 and shown on Figures 2-1a, 2-1b, 2-1c, and 2-1d. Laboratory reports are included in Appendix B.

2.3 Asbestos Containing Materials

KD Associates' Vermont-certified asbestos inspectors conducted the asbestos survey during the week of August 14, 2023. Samples were collected from pre-determined locations identified by Atlas. Several materials listed for sampling in the workplan were determined to not exist and were not sampled. Additional materials that were likely to contain asbestos were identified by KD Associates, KGSNE, and Clay Point Associates Inc. (Clay Point) (a subcontractor of Montrose) during the investigation and were also sampled.

A total of 97 samples were collected from suspect bulk building materials for laboratory analysis for asbestos. Multiple samples were collected from homogeneous areas identified throughout the building to identify asbestos content. Homogeneous areas consist of areas that appear to be similar in material color, texture, and date of installation or application. The samples were spread across 45 homogeneous areas.

The Atlas workplan called for the sampling of material that might exist behind the brick façade of the building and included the removal of brick on the exterior to investigate said possible materials. KD Associates attempted to reach materials behind the façade by removing bricks from one location on the north, west, and south sides of the building. The façade unexpectedly contained three layers of brick arranged in an offset pattern that would require removal of several bricks on the outermost layer in order to successfully remove bricks in the innermost layers. Montrose decided to not continue this exploration so as not to damage the historical façade.

The workplan had additionally called for investigation behind the vent covers in Rooms 7 and 15 to evaluate suspect materials behind them. Upon further investigation, the vents were actually determined to be drain chases from the bathrooms, and no covers were present. Montrose indicated that no samples needed to be collected from the drain chases.

Samples of drywall and joint compound were selected to be sampled from several rooms throughout the building in the Atlas workplan. KD Associates and Clay Point moved or eliminated several of the samples for more spatial coverage of different materials.

Bulk samples were transmitted under a chain-of-custody to EMSL Analytical, Inc. (EMSL), an accredited Vermont-certified laboratory located at 5 Constitution Way, Unit A in Woburn, Massachusetts. Samples were analyzed by polarized light microscopy (PLM) in accordance with the EPA "Method for Determination of Asbestos in Bulk Material"; EPA/600/R-93/116 (EPA, 1993). Any materials found to contain <2% asbestos by PLM analysis were analyzed via 400-point count.

Non-friable organically bound (NOB) samples were analyzed using via PLM with gravimetric reduction. Transmission Electron Microscopy (TEM) was used to confirm PLM results if PLM testing found NOB materials to be negative for asbestos content.

Each set of homogeneous bulk samples was analyzed using the "hit-stop" procedure. Per this procedure, analysis of additional duplicate samples collected from identical materials is not required if asbestos is detected in any one of the samples from the homogeneous group.

Sample locations and results are listed in Table 2-3 and shown on Figures 2-2a, 2-2b, 2-2c, and 2-2d. Laboratory reports are included in Appendix B.

2.4 PCB Bulk Material Sampling

On October 2, 2023, KD Associates returned to the Site to sample bulk building materials for PCB analysis. Samples were collected from pre-determined locations identified by Atlas. Several materials listed for sampling in the workplan were determined to not exist and were not sampled. Per the workplan, three samples of each material were collected.

Building material samples were collected using tools and scrapers that were decontaminated with a diluted hexane spray and deionized water between locations. Samples were submitted to Pace and were analyzed for PCBs using Method 8082 with Soxhlet Extraction. Sample locations and results are listed in Table 2-4 and shown on Figures 2-2a, 2-2b, 2-2c, and 2-2d. Laboratory reports are included in Appendix B.

2.5 Sub-Slab Sampling

On August 17, 2023 KGSNE oversaw the coring of concrete through the basement slab and collected five soil samples for PCB analysis from beneath the basement concrete floor. Cascade Environmental (Cascade) of Barre, Vermont first cleared the sample area of the concrete floor in the basement with a wire brush, making sure to scrape away any paint on the concrete floor. The area was wiped down with a rag. Cascade used a 4-inch concrete core drill with water to core

through the concrete slab to the soil below. A wet-vac was used during coring to ensure slurry did not penetrate the soil below. Once the core had been removed, KGSNE collected the soil sample using a decontaminated trowel. Samples were collected from Room 23, Room 27, Room 25A, Room 21, and Room 31. In general, concrete slab thickness was observed by field staff to be approximately 6 inches.

Soil samples were submitted to Pace under chain-of-custody. Samples were analyzed for PCBs using Method 8082 with Soxhlet Extraction. Sample results are listed in Table 2-5 and locations are shown on Figure 2-3. Laboratory reports are included in Appendix B.

2.6 Exterior Soil Sampling

On November 1 and 2, 2023, KGSNE oversaw the advancement of 24 soil borings around the exterior of the building. The locations were predetermined by Montrose based on high PCB results in Phase I materials samples. The samples were completed to evaluate potential presence of shallow soil contamination. Drilex Environmental (Drilex) used a hand-held Geoprobe and hammer drill to advance each boring. Soil samples were collected in 0.5-foot intervals to a depth of 5 feet below ground surface (bgs), and then in one-foot intervals from depths between 5 and 8 feet bgs. Samples were collected using a dedicated 24-inch acetate macro-core sampling sleeve. KGSNE visually classified soils in the field using the Modified Burmister Classification System. Soil descriptions and other pertinent subsurface observations are presented on boring logs included in Appendix C.

Sample location P-328-Ex was advanced through the concrete steps on the north side of the building. Below the steps was a void approximately 6 feet deep before soil was encountered. Drilex was able to advance a boring into the underlying dirt, but only to 12 feet bgs below the top of the step, as this was the depth limit of the tooling. KGSNE collected samples every 0.5 foot from 6 feet below the step to 11 feet below the step (the top 5 feet of the boring) and collected one 1-foot interval from 11 to 12 feet below the step.

One boring was supposed to be advanced into the soil underneath the concrete landing pad at the bottom of the northern basement steps. Drilex attempted this location but was still in concrete after 2 feet of drilling, which is the limit of the hammer drill bit. Montrose instructed KGSNE to drill through the first step above the landing to determine if the pad extended in that direction. Drilex reached the same 2 foot depth into the pad, and Montrose instructed KGSNE to skip this location.

Soil samples were submitted to Pace under chain-of-custody. Samples were analyzed for PCBs using Method 8082 with Soxhlet Extraction. Only the top interval (0-0.5 feet bgs) samples from

each location were initially submitted for analysis; all other samples were placed on hold at the laboratory and analyzed as needed given the results of the shallower samples. Sample locations and results are listed in Table 2-5 and shown on Figure 2-3. Laboratory reports are included in Appendix B.

3.0 DATA USABILITY AND VALIDATION

KGSNE performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic and inorganic analytical data collected during the TBA. The Tier 1 Stage 2A manual data review was performed in accordance with the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (EPA, 2020a); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (EPA 2020b); USEPA's National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA 2020c); the Program QAPP (KGSNE, 2022) (RFA# 12263), dated October 2022, and the QAPPA (KGSNE, 2023a) for the St. Johnsbury Armory Site, which appends the October 2022 Program QAPP.

Data were evaluated based on the following parameters: overall evaluation of data and potential usability issues, data completeness, preservation and technical holding times, blanks, surrogates (organic analyses only), internal standards, matrix spike analysis, laboratory duplicates, laboratory control samples (LCS), field duplicates, ICP serial dilutions (metals only), target analyte identification, and reported quantitation limits.

In general, the data meets the project quality criteria and can be used without restriction. Qualified results are noted in the data summary tables. Limitations and qualification of the data were noted and explained in the data review memorandum provided in Appendix D.

4.0 SUMMARY OF TBA SAMPLING RESULTS

KGSNE performed a review of the sampling data generated during the TBA investigation. A brief summary of the laboratory analytical results is presented below.

4.1 PCB Paints and Coatings

KGSNE submitted 278 PCB paint samples, plus additional quality control samples. Samples that had greater than 50 parts per million (ppm) of total PCBs were used by Montrose to determine sample locations for Phase II sampling. Below is a summary of the PCB paint and coating results:

Location	Total PCB Paints/Coating Samples Collected	Total Samples Exceeding 50 ppm of PCBs
Second Floor	48	8
First Floor	94	8
Basement	96	65
Exterior	40	11

Analytical laboratory reports are included as Appendix B. Soil analytical results are presented in Table 2-1. Figures 2-1a, 2-1b, 2-1c, and 2-1d depict the sample locations.

4.2 Lead Based Paint

Five composite samples were submitted for lead TCLP for waste characterization. Results ranged from 0.21 milligrams per liter (mg/L) to 28 mg/L. Analytical laboratory reports are included as Appendix B. Lead analytical results are presented in Table 2-2. Figures 2-1a, 2-1b, 2-1c, and 2-1d depict sample locations.

4.3 Asbestos Containing Materials

KGSNE submitted 97 ACM samples from 45 homogenous areas, plus additional quality control samples. Each set of homogeneous bulk samples was analyzed using the "hit-stop" procedure. Per this procedure, analysis of additional duplicate samples collected from identical materials is not required if asbestos is detected in any one of the samples from the homogeneous group.

ACMs identified during the HBMS include:

- White caulking along the roof of the building;
- Flashing caulk on the southwest loading ramp roofline;
- Light gray caulking along the roof-chimney join;
- Built up tar paper on the gambrel roof;
- Asphalt layer on the gambrel roof;
- Joint compound in Rooms 6 and 7;
- Black mastic in Room 18;
- Gray adhesive behind the faux wood wall paneling in Room 5;
- Silver paint on the metal roof of the southwest loading dock; and
- Built up roofing under the flat roof.

Samples that returned positive results for the presence of asbestos are presented on Table 2-3. Laboratory analytical data for asbestos analysis is included in Appendix B. Sample locations are presented in Figures 2-2a, 2-2b, 2-2c, and 2-2d.

4.4 PCB Bulk Materials

KGSNE submitted 24 bulk building materials for PCB analysis. Bulk samples that returned positive results for PCBs are presented on Table 4-4. Laboratory analytical data for PCB analysis is included in Appendix B. Sample locations are presented in Figures 2-2a, 2-2b, 2-2c, and 2-2d.

4.5 Sub Slab Sampling

KGSNE submitted five soil samples collected from beneath the slab of the building foundation. No PCBs were detected in any of the samples. PCB soil analytical results are presented on Table 2-5. Sample locations are shown on Figure 2-3. Analytical laboratory reports are included as Appendix B.

4.6 Exterior Soil Sampling

KGSNE submitted 24 soil samples from borings advanced on the exterior of the building for PCB analysis. Over 280 samples collected from subsequent depths were also submitted to the laboratory and placed on hold, pending results of the initial sample analyses. The following locations reported PCB detections in the 0-0.5 foot interval and had deeper intervals analyzed;

- P-308-Ex had one additional interval analyzed
- P-313-Ex had two additional intervals analyzed
- P-314-Ex had one additional interval analyzed
- P-315-Ex had two additional intervals analyzed
- P-316-Ex had one additional interval analyzed
- P-321-Ex had one additional interval analyzed
- P-323-Ex had one additional interval analyzed
- P-326-Ex had one additional interval analyzed

In total, 34 soil samples were analyzed from the borings.

The highest concentrations of PCBs were detected in samples collected from boring P-315-Ex. Total PCBs were reported at a concentration of 4.4 ppm in the 0-0.5 foot sample. Total PCBs were reported at a concentration of 1.3 ppm in the 0.5-1.0 foot sample, and at a concentration of 0.097

ppm in the 1-1.5 foot sample. P-315-Ex is located to the west of the southwest loading ramp structure.

No other soil samples analyzed reported concentrations exceeding 1 ppm total PCBs.

Soil analytical results are presented on Table 2-5. Sample locations are shown on Figure 2-3. Analytical laboratory reports are included as Appendix B.

5.0 CONCLUSIONS

KGSNE has completed this TBA at the St. Johnsbury Armory located at 1249 Main Street, St. Johnsbury, Vermont for the EPA. The overall objective of the TBA was to perform a supplemental HBMS at the Site to address data gaps identified by Atlas, and to conduct subsequent sampling as requested by Montrose.

The results of this HBMS have identified additional materials at the Site that require consideration for future redevelopment activities, including:

- PCBs in paint, caulk, and other bulk building materials;
- PCBs in exterior soil; and
- Asbestos in various building materials including caulk, mastic, roofing, paint, and joint compound.

The supplemental data will be used by Montrose to further define the distribution of hazardous materials in support of cleanup planning and materials abatement for future building renovation and reuse or demolition and disposal.

6.0 REFERENCES

Atlas Technical Consultants, 2023. Workplan for Additional Hazardous Building Materials Sampling. March 20.

KGSNE, JV LLC, 2022. Program Quality Assurance Project Plan (Program QAPP). October 27.

KGSNE, JV LLC, 2023a. Quality Assurance Project Plan Addendum (QAPPA). July 10.

KGSNE, JV LLC, 2023b. Quality Assurance Project Plan Addendum Update. October 31.

USEPA, 2020a. EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures. September.

USEPA, 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. November.

USEPA, 2020c. National Functional Guidelines for Inorganic Superfund Methods Data Review. November.

USEPA, 1993. Method for Determination of Asbestos in Bulk Material. June

TABLES

Table 2-1
PCB Paints and Coatings Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	2nd	3	East	270	Plaster/Lath	Beige/Brown	P-001-R03E		<3.9	<3.9	<3.9	<3.9	<3.9	37	<3.9	<3.9	<3.9	37
			South	270	Plaster/Lath	Beige/Brown/Pink	P-002-R03S		<4.8	<4.8	<4.8	<4.8	<4.8	46	<4.8	<4.8	<4.8	46
			West	270	Plaster/Lath	Beige/Yellow/ Salmon/Brown	P-003-R03W		<4.2	<4.2	<4.2	<4.2	<4.2	43	<4.2	<4.2	<4.2	43
			North	270	Plaster/Lath													
			Ceiling	900	Plaster/Lath	White	P-004-R03C		<3.8	<3.8	<3.8	<3.8	<3.8	29	<3.8	<3.8	<3.8	29
			Wood Trim	15	Wood Trim	Salmon	P-005-R03WT		<4.8	<4.8	<4.8	<4.8	<4.8	58	<4.8	<4.8	<4.8	58
			Door	20		Blue	P-006-R03D		<5.0	<5.0	<5.0	<5.0	<5.0	41	<5.0	<5.0	<5.0	41
			Floor	900	Underlayment													
		4	East	270	Plaster/Lath	Beige/Salmon	P-007-R04E		<4.9	<4.9	<4.9	<4.9	<4.9	23	<4.9	<4.9	<4.9	23
			South	180	Plaster/Lath	Beige/Salmon	P-008-R04S		<4.3	<4.3	<4.3	<4.3	<4.3	17	<4.3	<4.3	<4.3	17
			West	270	Plaster/Lath	Beige/Salmon/ Maroon	P-009-R04W		<4.4	<4.4	<4.4	<4.4	<4.4	24	<4.4	<4.4	<4.4	24
			North	180	Plaster/Lath													
			Ceiling	600	Bare Lath													
			Wood Trim	15		Drk. Beige	P-010-R04WT		<4.7	<4.7	<4.7	<4.7	<4.7	51	<4.7	<4.7	<4.7	51
			Door	20		Drk. Beige	P-011-R04D		<4.7	<4.7	<4.7	<4.7	<4.7	50	<4.7	<4.7	<4.7	50
			Floor	600	Underlayment													
		5	East	180	Plaster/Lath	Lt. Biege	P-012-R05E		<4.7	<4.7	<4.7	<4.7	<4.7	18	<4.7	<4.7	<4.7	18
			South	90	Plaster/Lath	Lt. Blue	P-013-R05S		<4.7	<4.7	<4.7	<4.7	<4.7	31	<4.7	<4.7	<4.7	31
			West	180	Plaster/Lath	Lt. Beige	P-014-R05W		<5.0	<5.0	<5.0	<5.0	<5.0	22	<5.0	<5.0	<5.0	22
			North	90	Plaster/Lath													
			Ceiling	200	Drop Tiles	White	P-015-R05C		<4.2	<4.2	<4.2	<4.2	<4.2	16	<4.2	<4.2	<4.2	16
			Wood Trim	10		Lt. Beige	P-017-R05WT		<4.6	<4.6	<4.6	<4.6	<4.6	35	<4.6	<4.6	<4.6	35
			Door	20		Robin's Egg Blue	P-024-R05D		<4.9	<4.9	<4.9	<4.9	<4.9	72	<4.9	<4.9	<4.9	72
			Floor	200	Hardwood	Brown	P-016-R05F		<4.7	<4.7	<4.7	<4.7	<4.7	21	<4.7	<4.7	<4.7	21
		6	East	72	Plaster/Lath	Drk. Beige/Lt. Green	P-018-R06E		<4.7	<4.7	<4.7	<4.7	<4.7	23	<4.7	<4.7	<4.7	23
			South	72	Plaster/Lath	Drk. Beige/Lt. Green	P-019-R06S		<4.6	<4.6	<4.6	<4.6	<4.6	21	<4.6	<4.6	<4.6	21
			West	72	Plaster/Lath													
			North	72	Plaster/Lath													
			Ceiling	64	Drywall	White	P-020-R06C		<4.9	<4.9	<4.9	<4.9	<4.9	18	<4.9	<4.9	<4.9	18
			Wood Trim	4		Robins Egg Blue/Orange	P-021-R06WT		<4.7	<4.7	<4.7	<4.7	<4.7	38	<4.7	<4.7	<4.7	38
			Door	20		White	P-022-R06D		<3.7	<3.7	<3.7	<3.7	<3.7	49	<3.7	<3.7	<3.7	49
			Floor	64	Hardwood	Brown	P-023-R06F		<4.8	<4.8	<4.8	<4.8	<4.8	52	<4.8	<4.8	<4.8	52
		7	East	54	Plaster/Lath	Drk. Beige	P-025-R07E		<4.9	<4.9	<4.9	<4.9	<4.9	22	<4.9	<4.9	<4.9	22
			South	54	Plaster/Lath	Drk. Beige	P-026-R07S		<4.5	<4.5	<4.5	<4.5	<4.5	14	<4.5	<4.5	<4.5	14
			West	54	Plaster/Lath													
			North	54	Plaster/Lath													
			Wood Trim	3		Drk. Beige/Green	P-029-R07WT		<4.4	<4.4	<4.4	<4.4	<4.4	35	<4.4	<4.4	<4.4	35
			Door	20		Beige	P-037-R07D		<4.8	<4.8	<4.8	<4.8	<4.8	19	<4.8	<4.8	<4.8	19
			Ceiling	36	Drywall	White	P-027-R07C		<4.6	<4.6	<4.6	<4.6	<4.6	33	<4.6	<4.6	<4.6	33
			Floor	36	Hardwood	Brown	P-028-R07F		<4.1	<4.1	<4.1	<4.1	<4.1	36	<4.1	<4.1	<4.1	36
		8	East	180	Plaster/Lath	Yellow/Green	P-030-R08E	Lab ID P-030-R09E	<4.8	<4.8	<4.8	<4.8	<4.8	20	<4.8	<4.8	<4.8	20
			South	108	Plaster/Lath	Yellow	P-031-R08S	Lab ID P-0310R09S	<3.7	<3.7	<3.7	<3.7	<3.7	16	<3.7	<3.7	<3.7	16
			West	180	Plaster/Lath	Yellow	P-032-R08W	Lab ID P-032-R09W	<4.3	<4.3	<4.3	<4.3	<4.3	11	<4.3	<4.3	<4.3	11
			North	108	Plaster/Lath													
			Ceiling	240	Plaster/Lath	White	P-033-R08C		<4.2	<4.2	<4.2	<4.2	<4.2	20	<4.2	<4.2	<4.2	20
			Wood Trim	10		Red/Maroon	P-035-R08WT		<4.9	<4.9	<4.9	<4.9	<4.9	34	<4.9	<4.9	<4.9	34
			Door	20		Red/Maroon	P-036-R08D		<4.9	<4.9	<4.9	<4.9	<4.9	45	<4.9	<4.9	<4.9	45
			Floor	240	Hardwood	Brown	P-034-R08F		<4.9	<4.9	<4.9	<4.9	<4.9	51	<4.9	<4.9	<4.9	51
		9	East	180	Plaster/Lath	Blue/White	P-038-R09E		<4.9	<4.9	<4.9	<4.9	<4.9	50	<4.9	<4.9	<4.9	50
			South	90	Plaster/Lath	Yellow/Lt. Blue	P-039-R09S		<4.8	<4.8	<4.8	<4.8	<4.8	17	<4.8	<4.8	<4.8	17
			West	180	Plaster/Lath	Lt. Beige/Blue	P-040-R09W		<4.4	<4.4	<4.4	<4.4	<4.4	16	<4.4	<4.4	<4.4	16
			North	90	Plaster/Lath													
			Ceiling	200	Plaster/Lath	White	P-041-R09C		<2.4	<2.4	<2.4	<2.4	<2.4	14	<2.4	<2.4	<2.4	14
			Wood Trim	10		Blue	P-043-R09WT		<4.9	<4.9	<4.9	<4.9	<4.9	27	<4.9	<4.9	<4.9	27
			Door	20		Blue	P-044-R09D		<5.0	<5.0	<5.0	<5.0	<5.0	31	<5.0	<5.0	<5.0	31
			Floor	200	Hardwood	Brown	P-042-R09F		<5.0	<5.0	<5.0	<5.0	<5.0	56	<5.0	<5.0	<5.0	56

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	2nd	10	East	180	Plaster/Lath	White	P-045-R10E		<2.4	<2.4	<2.4	<2.4	<2.4	13	<2.4	<2.4	<2.4	13
			South	90	Plaster/Lath	White	P-046-R10S		<4.7	<4.7	<4.7	<4.7	<4.7	21	<4.7	<4.7	<4.7	21
			West	180	Plaster/Lath	White	P-047-R10W		<4.9	<4.9	<4.9	<4.9	<4.9	19	<4.9	<4.9	<4.9	19
			North	90	Plaster/Lath													
			Ceiling	200	Bare Lath													
			Wood Trim	10		White	P-156-R10WT		<9.9	<9.9	<9.9	<9.9	<9.9	38	<9.9	<9.9	<9.9	38
			Door	20				No Door										
			Floor	200	Underlayment													
	1st	Stairwell 1-2	East	NA	NA													
			South	225	Plaster/Lath	White/Salmon	P-257-S12S		<4.6	<4.6	<4.6	<4.6	<4.6	55	<4.6	<4.6	<4.6	55
			West	54	Plaster/Lath													
			North	225	Plaster/Lath	White	P-223-S12N		<4.7	<4.7	<4.7	<4.7	<4.7	64	<4.7	<4.7	<4.7	64
			Ceiling	150	Plaster/Lath	Beige/White/Red	P-220-S12C		<3.5	<3.5	<3.5	<3.5	<3.5	19	<3.5	<3.5	<3.5	19
			Wood Rails	20		Beige	P-274-S12R		<3.9	<3.9	<3.9	<3.9	<3.9	50	<3.9	<3.9	<3.9	50
			Floor	150	Wood Steps	Light Green/Orange/Blue	P-155-S12F		<9.9	<9.9	<9.9	<9.9	<9.9	65	<9.9	<9.9	<9.9	65
		11	East	135	Drywall over	Beige/White	P-158-R11EDW		<0.50	<0.50	<0.50	<0.50	<0.50	2.7 J	<0.50	<0.50	<0.50	2.7
			East	135	Plaster/Lath	White/Orange/Light Green	P-212-R11EP		<3.9	<3.9	<3.9	<3.9	<3.9	16	<3.9	<3.9	<3.9	16
			South	270	Drywall over	Salmon	P-217-R11SDW		<1.8	<1.8	<1.8	<1.8	<1.8	6.2	<1.8	<1.8	<1.8	6.2
			South	270	Plaster/Lath			No plaster										
			West	135	Drywall over	Salmon	P-258-R11WDW		<3.9	<3.9	<3.9	<3.9	<3.9	15	<3.9	<3.9	<3.9	15
			West	135	Plaster/Lath	White	P-164-R11WP		<4.1	<4.1	<4.1	<4.1	<4.1	20	<4.1	<4.1	<4.1	20
			North	270	Drywall over Plaster/Lath													
			Ceiling	450	Drywall over	White	P-254-R11CDW		<0.50	<0.50	<0.50	<0.50	3.7 J	3.4 J	<0.50	<0.50	<0.50	3.4
			Ceiling	450	Plaster/Lath	White	P-231-R11CP		<0.91	<0.91	<0.91	<0.91	<0.91	1.7	<0.91	<0.91	<0.91	1.7
			Wood Trim	7.5		Dark Green/Beige/Blue	P-248-R11WT		<4.2	<4.2	<4.2	<4.2	<4.2	33	<4.2	<4.2	<4.2	33
			Door	20		White/Beige/Blue	P-250-R11D		<4.7	<4.7	<4.7	<4.7	<4.7	50	<4.7	<4.7	<4.7	50
			Floor	450	Hardwood	Brown	P-157-R11F		<2.0	<2.0	<2.0	<2.0	<2.0	11	<2.0	<2.0	<2.0	11
		12	East	270	Drywall over	Beige/White	P-244-R12EDW		<0.45	<0.45	<0.45	<0.45	2.5	3	<0.45	<0.45	<0.45	5.5
			East	270	Plaster/Lath	Beige/Blue	P-251-R12EW		<2.3	<2.3	<2.3	<2.3	<2.3	10	<2.3	<2.3	<2.3	10
			South	180	Drywall over	Light Yellow	P-162-R12SDW		<0.80	<0.80	<0.80	<0.80	3.6	3.3	<0.80	<0.80	<0.80	6.9
			South	180	Plaster/Lath			No plaster										
			West	270	Drywall over													
			West	270	Plywood													
			North	180	Drywall over	White	P-243-R12NDW		<2.3	<2.3	<2.3	<2.3	<2.3	6.6	<2.3	<2.3	<2.3	6.6
			North	180	Plaster/Lath	White	P-247-R12NP		<0.42	<0.42	<0.42	<0.42	<0.42	2.4	<0.42	<0.42	<0.42	2.4
			Ceiling	600	Drywall	White	P-214-R12CDW		<1.0	<1.0	<1.0	<1.0	<1.0	5.3	<1.0	<1.0	<1.0	5.3
			Ceiling	600	Particle board	White	P-213-R12CPB		<2.3	<2.3	<2.3	<2.3	<2.3	9	<2.3	<2.3	<2.3	9
			Ceiling	600	Plaster/Lath	White	P-242-R12-CP		<0.37	<0.37	<0.37	<0.37	<0.37	0.66	<0.37	<0.37	<0.37	0.66
			Wood Trim	15		Green/Blue	P-228-R12WT		<4.1	<4.1	<4.1	<4.1	<4.1	26	<4.1	<4.1	<4.1	26
			Floor	600	Hardwood	Brown	P-234-R12F		<0.94	<0.94	<0.94	<0.94	7	6.4	<0.94	<0.94	<0.94	13
		13	East	54	Plaster/Lath	Dark Green/Light Green	P-233-R13E		<4.1	<4.1	<4.1	<4.1	<4.1	8.3	<4.1	<4.1	<4.1	8.3
			South	90	Plaster/Lath	Light Green/Dark Green	P-225-R13S		<4.2	<4.2	<4.2	<4.2	<4.2	4.5	<4.2	<4.2	<4.2	4.5
			West	54	Plaster/Lath													
			North	90	Plaster/Lath													
			Ceiling	60	Wood Panel	White	P-230-R13CWP		<2.2	<2.2	<2.2	<2.2	<2.2	4.5	<2.2	<2.2	<2.2	4.5
			Ceiling	60	Plaster/Lath	White	P-216-R13CP		<0.092	<0.092	<0.092	<0.092	<0.092	0.21	<0.092	<0.092	<0.092	0.21
			Wood Trim	3		Dark Blue	P-218-R13WT		<3.4	<3.4	<3.4	<3.4	<3.4	11	<3.4	<3.4	<3.4	11
			Door	20		White Beige	P-240-R13D		<3.9	<3.9	<3.9	<3.9	<3.9	25	<3.9	<3.9	<3.9	25
			Floor	60	Hardwood	Brown	P-232-R13F		<4.8	<4.8	<4.8	<4.8	<4.8	27	<4.8	<4.8	<4.8	27
		14	East	216	Drywall	Beige	P-219-R14EDW		<1.8	<1.8	<1.8	<1.8	<1.8	6.8	<1.8	<1.8	<1.8	6.8
			East	216	Plaster/Lath	White	P-227-R14-EP		<1.7	<1.7	<1.7	<1.7	1.8	3	<1.7	<1.7	<1.7	4.8
			South	108	Drywall	Salmon	P-226-R14SDW		<2.1	<2.1	<2.1	<2.1	<2.1	12	<2.1	<2.1	<2.1	12
			South	108	Plaster/Lath	White	P-255-R14SP		<4.2	<4.2	<4.2	<4.2	<4.2	5.3	<4.2	<4.2	<4.2	5.3
			West	216	Drywall	Beige/Yellow	P-163-R14WDW		<0.89	<0.89	<0.89	<0.89	3.5	2.1	<0.89	<0.89	<0.89	5.6
			West	216	Plaster/Lath	Pink	P-249-R14WP		<0.43	<0.43	<0.43	<0.43	<0.43	1.5	<0.43	<0.43	<0.43	1.5
			North	108	Drywall over Plaster/Lath													
			Ceiling	288	Drywall	White	P-229-R14CDW		<2.2	<2.2	<2.2	<2.2	<2.2	8.9	<2.2	<2.2	<2.2	8.9
			Ceiling	288	Drop Ceiling Wood Panel	White	P-160-R14CWP		<2.0	<2.0	<2.0	<2.0	<2.0	8.3	<2.0	<2.0	<2.0	8.3
			Ceiling	288	Plaster/Lath	White	P-208-R14CP		<0.48	<0.48	<0.48	<0.48	<0.48	1.4	<0.48	<0.48	<0.48	1.4
			Wood Trim	12		Green/Blue	P-159-R14WT		<4.9	<4.9	<4.9	<4.9	<4.9	20	<4.9	<4.9	<4.9	20
			Door	20				No door										
			Floor	288	Hardwood	Brown/Yellow	P-154-R14F		<2.0	<2.0	<2.0	<2.0	<2.0	12	<2.0	<2.0	<2.0	12

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	1st	15	East	54	Plaster/Lath	Pink/Green/ White/Brown	P-259-R15E		<4.5	<4.5	<4.5	<4.5	<4.5	56	<4.5	<4.5	<4.5	56
			South	54	Plaster/Lath	Pink/Green/ White/Brown	P-236-R15S		<3.8	<3.8	<3.8	<3.8	<3.8	59	<3.8	<3.8	<3.8	59
			West	54	Plaster/Lath													
			North	54	Plaster/Lath													
			Ceiling	36	Plywood panel	Beige/Pink/Brown	P-215-R15CPW		<4.1	<4.1	<4.1	<4.1	<4.1	25	<4.1	<4.1	<4.1	25
			Ceiling	36	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP		<0.43	<0.43	<0.43	<0.43	<0.43	0.59	<0.43	<0.43	<0.43	0.59
			Wood Trim	3		Light Brown/Blue/White	P-221-R15WT		<3.8	<3.8	<3.8	<3.8	<3.8	63	<3.8	<3.8	<3.8	63
			Door	20		Dark Green/White	P-253-R15D		<4.4	<4.4	<4.4	<4.4	<4.4	32	<4.4	<4.4	<4.4	32
			Floor	36	Vinyl/Lin over Hardwood													
		16	East	225	Wood Panel	White	P-134-R16EW		<4.0	<4.0	<4.0	<4.0	<4.0	21	<4.0	<4.0	<4.0	21
			East	225	Plaster/Lath	Light Green/Dark Green	P-133-R16EP		<0.46	<0.46	<0.46	<0.46	<0.46	5.5	<0.46	<0.46	<0.46	5.5
			South	270	Wood Panel	White	P-161-R16SWP		<5.0	<5.0	<5.0	<5.0	17	18	<5.0	<5.0	<5.0	35
			South	270	Plaster/Lath	Green	P-209-R16SP		<0.97	<0.97	<0.97	<0.97	2.1 J	2.3	<0.97	<0.97	<0.97	2.3
			West	225	None													
			North	270	Wood Panel	Green/White	P-210-R16NWP		<4.4	<4.4	<4.4	<4.4	<4.4	26	<4.4	<4.4	<4.4	26
			North	270	Plaster/Lath	White	P-222-R16NP		<3.6	<3.6	<3.6	<3.6	<3.6	16	<3.6	<3.6	<3.6	16
			Ceiling	750	Plaster/Lath	White	P-207-R16C		<4.2	<4.2	<4.2	<4.2	<4.2	16	<4.2	<4.2	<4.2	16
			Wood Trim	13		Dark Green	P-135-R16WT		<3.8	<3.8	<3.8	<3.8	<3.8	33	<3.8	<3.8	<3.8	33
			Door	20			P-165-R16D		<4.4	<4.4	<4.4	<4.4	<4.4	34	<4.4	<4.4	<4.4	34
			Floor	750	Underlayment													
		Gym	East	1,386	Wood panelling	White	P-145-EWP1		<0.99	<0.99	<0.99	<0.99	<0.99	3.4	<0.99	<0.99	<0.99	3.4
						White	P-146-EWP2		<1.0	<1.0	<1.0	<1.0	<1.0	5.8	<1.0	<1.0	<1.0	5.8
						White/Green	P-147-EWP3		<1.0	<1.0	<1.0	<1.0	<1.0	5.6	<1.0	<1.0	<1.0	5.6
				1386	Particle Board	Green	P-148-EPB1		<0.99	<0.99	<0.99	<0.99	<0.99	9.3	<0.99	<0.99	<0.99	9.3
						Green	P-149-EPB2		<1.0	<1.0	<1.0	<1.0	<1.0	4.7	<1.0	<1.0	<1.0	4.7
						Green	P-150-EPB3		<2.0	<2.0	<2.0	<2.0	<2.0	19	<2.0	<2.0	<2.0	19
				1386	Plaster/Lath	White	P-151-EP1		<0.099	<0.099	<0.099	<0.099	<0.099	0.55	<0.099	<0.099	<0.099	0.55
						White	P-152-EP2		<0.10	<0.10	<0.10	<0.10	<0.10	0.62	<0.10	<0.10	<0.10	0.62
						White	P-153-EP3		<0.10	<0.10	<0.10	<0.10	<0.10	1.2	<0.10	<0.10	<0.10	1.2
					Cellotex	Light Green	P-265-R17EC1	Added during initial sample collection	<0.44	<0.44	<0.44	<0.44	<0.44	6.3	<0.44	<0.44	<0.44	6.3
						Light Green	P-266-R17EC2	Added during initial sample collection	<0.44	<0.44	<0.44	<0.44	<0.44	5.3 J	<0.44	<0.44	<0.44	5.3
						White	P-267-R17EC3	Added during initial sample collection	<0.38	<0.38	<0.38	<0.38	<0.38	2.9	<0.38	<0.38	<0.38	2.9
						White	P-268-R17EC4	Added during initial sample collection	<0.42	<0.42	<0.42	<0.42	<0.42	3.1	<0.42	<0.42	<0.42	3.1
			South	957	Brick	White/Blue	P-252-R17S		<1.9	<1.9	<1.9	<1.9	<1.9	12	<1.9	<1.9	<1.9	12
			West	1,386	Brick	White/Yellow	P-204-R17W	Taken from high spot on the wall	<1.8	<1.8	<1.8	<1.8	<1.8	4.8	<1.8	<1.8	<1.8	4.8
				1,386	Brick	White/Yellow	P-205-R17W	Taken from a low spot on the wall	<2.3	<2.3	<2.3	<2.3	<2.3	8.2	<2.3	<2.3	<2.3	8.2
				1,386	Brick	White/Yellow	P-206-R17W	Taken from a low spot on the wall	<1.9	<1.9	<1.9	<1.9	<1.9	10	<1.9	<1.9	<1.9	10
			North	957	Brick	White/Yellow/Green	P-136-GN		<0.45	<0.45	<0.45	<0.45	<0.45	6.1	<0.45	<0.45	<0.45	6.1
			Ceiling	5,481	Particle board/plywood	White/Beige	P-193-GC		<0.48	<0.48	<0.48	<0.48	<0.48	1.6	<0.48	<0.48	<0.48	1.6
					Particle board/plywood	White/Beige	P-194-GC		<0.38	<0.38	<0.38	<0.38	<0.38	0.64	<0.38	<0.38	<0.38	0.64
					Particle board/plywood	White/Beige	P-195-GC		<0.37	<0.37	<0.37	<0.37	<0.37	0.85	<0.37	<0.37	<0.37	0.85
					Particle board/plywood	White/Beige	P-196-GC		<0.42	<0.42	<0.42	<0.42	<0.42	1.5	<0.42	<0.42	<0.42	1.5
					Particle board/plywood	White/Beige	P-197-GC		<0.37	<0.37	<0.37	<0.37	<0.37	0.57	<0.37	<0.37	<0.37	0.57
					Particle board/plywood	White/Beige	P-198-GC		<0.40	<0.40	<0.40	<0.40	<0.40	1.1	<0.40	<0.40	<0.40	1.1
			Door	20				No door										
			Metal Girders	1,500	Painted metal	White	P-199		<1.9	<1.9	<1.9	<1.9	<1.9	7.6	<1.9	<1.9	<1.9	7.6
							P-200		<0.46	<0.46	<0.46	<0.46	<0.46	4.6	<0.46	<0.46	<0.46	4.6
							P-201		<1.0	<1.0	<1.0	<1.0	<1.0	7.9	<1.0	<1.0	<1.0	7.9
							P-202		<1.9	<1.9	<1.9	<1.9	<1.9	8.5	<1.9	<1.9	<1.9	8.5
			Floor	4,933	Hardwood/ polyurethane	Brown	P-137-GFN	Taken from north section of the floor	<0.50	<0.50	<0.50	<0.50	<0.50	3	<0.50	<0.50	<0.50	3
						Brown	P-138-GFE	Taken from east section of the floor	<0.49	<0.49	<0.49	<0.49	<0.49	3.6	<0.49	<0.49	<0.49	3.6
						Brown	P-139-GFS	Taken from south section of the floor	<0.43	<0.43	<0.43	<0.43	<0.43	7.1	<0.43	<0.43	<0.43	7.1
						Brown	P-140-GFW	Taken from west section of the floor	<0.45	<0.45	<0.45	<0.45	<0.45	4.1	<0.45	<0.45	<0.45	4.1
						Brown	P-141-GFC	Taken from central section of the floor	<1.0	<1.0	<1.0	<1.0	<1.0	7.9	<1.0	<1.0	<1.0	7.9
			Floor	164	Hardwood/Dk green	Dark Green	P-142-GFDG		<0.98	<0.98	<0.98	<0.98	<0.98	3.7	<0.98	<0.98	<0.98	3.7
			Floor	164	Hardwood/Lt green	Light Green	P-143-GFLG		<2.0	<2.0	<2.0	<2.0	<2.0	13	<2.0	<2.0	<2.0	13
			Floor	164	Hardwood/White	White	P-144-GFW		<0.10	<0.10	<0.10	<0.10	<0.10	1.4	<0.10	<0.10	<0.10	1.4

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	Basement	Stairwell 0-1	East		NA													
			South	225	Plaster/Lath	Beige/Green/Brown	P-062-S01S		<2.0	<2.0	<2.0	<2.0	<2.0	18	<2.0	<2.0	<2.0	18
			West	54	Plaster/Lath	Beige/Green/Brown	P-063-S01W		<2.0	<2.0	<2.0	<2.0	<2.0	40	<2.0	<2.0	<2.0	40
			North	225	Plaster/Lath	Beige/Brown	P-064-S01N		<4.0	<4.0	<4.0	<4.0	<4.0	43	<4.0	<4.0	<4.0	43
			Ceiling	150	Drywall	White	P-066-S01C		<0.20	<0.20	<0.20	<0.20	<0.20	0.33 J	<0.20	<0.20	<0.20	0.33
			Wood Rails	20		Dark Green	P-065-S01R	Labeled P-065-S01C in lab report	<4.0	<4.0	<4.0	<4.0	<4.0	81 J	<4.0	<4.0	<4.0	81
			Door	20		White/ Dark Green	P-067-S01D		<4.0	<4.0	<4.0	<4.0	<4.0	65	<4.0	<4.0	<4.0	65
			Floor	150	Wood Steps	White/Dark Green/ Black/Brown/ Light Blue	P-239-S01F		<7.6	<7.6	<7.6	<7.6	<7.6	110	<7.6	<7.6	<7.6	110
		18	East	180	Brick	Light Blue/Salmon/ Brown	P-048-R18E		<9.8	<9.8	<9.8	<9.8	<9.8	180	<9.8	<9.8	<9.8	180
			South	135	Brick	Light Blue/ White	P-049-R18S		<24	<24	<24	<24	<24	330	<24	<24	<24	330
			West	180	Brick													
			North	135	Concrete	White/Green/Drk. Grey	P-051-R18NC		<24	<24	<24	<24	<24	290	<24	<24	<24	290
					Brick	White/Beige	P-050-R18NB		<8.8	<8.8	<8.8	<8.8	<8.8	110	<8.8	<8.8	<8.8	110
			Ceiling	300	Drywall													
			Ceiling	300	Pressed tin	Dark Beige/Black	P-052-R18C		<4.3	<4.3	<4.3	<4.3	<4.3	19	<4.3	<4.3	<4.3	19
			Ceiling	300	Lath													
			Floor	300	Gray Painted Concrete													
		20	East	270	Brick	White/Dark Grey	P-053-R20E		<250	<250	<250	<250	<250	4,000	<250	<250	<250	4,000
			South	180	Brick													
			West	270	Brick	Light Green	P-054-R20W		<250	<250	<250	<250	<250	5,100	<250	<250	<250	5,100
			North	180	Concrete	Beige/Drk. Grey	P-056-R20NC		<480	<480	<480	<480	<480	6,400	<480	<480	<480	6,400
					Brick	Light Green	P-055-R20NB		<90	<90	<90	<90	<90	1,300	<90	<90	<90	1,300
			Ceiling	600	None													
			Floor	600	Unpainted Concrete													
		21	East	270	Concrete	Light Blue/ Brown	P-057-R21EC		<8.8	<8.8	<8.8	<8.8	<8.8	86	<8.8	<8.8	<8.8	86
					Brick	Pink/Lt. Green/Brown	P-058-R21EB		<4.4	<4.4	<4.4	<4.4	<4.4	52	<4.4	<4.4	<4.4	52
			South	180	Brick	White/Light Blue	P-059-R21S		<47	<47	<47	<47	<47	380	<47	<47	<47	380
			West	270	Brick	Blue/Light Green	P-094-R21W		<3.9	<3.9	<3.9	<3.9	<3.9	51	<3.9	<3.9	<3.9	51
			North	180	Concrete/Brick													
			Ceiling	600	Drywall	White	P-060-R21C		<4.6	<4.6	<4.6	<4.6	<4.6	50	<4.6	<4.6	<4.6	50
			Door	20		Light Blue/White/ Green/Orange/ yellow	P-061-R21D		<4.0	<4.0	<4.0	<4.0	<4.0	52	<4.0	<4.0	<4.0	52
			Floor	600	Beige Painted Concrete	Grey/Beige	P-095-R21FN	North End	<2.0	<2.0	<2.0	<2.0	<2.0	21	<2.0	<2.0	<2.0	21
			Floor	600	Beige Painted Concrete	Grey/Beige	P-096-R21FS	South End	<2.0	<2.0	<2.0	<2.0	10	16	<2.0	<2.0	<2.0	26
		22	East	108	Painted Drywall	Yellow/White	P-068-R22EDW		<4.0	<4.0	<4.0	<4.0	<4.0	52	<4.0	<4.0	<4.0	52
			East	108	Concrete Foundation	Brown	P-069-R22EC		<40	<40	<40	<40	<40	460	<40	<40	<40	460
			South	225	Printed Plywood	Yellow/Dark Blue	P-080-R22SPW		<2.0	<2.0	<2.0	<2.0	<2.0	25	<2.0	<2.0	<2.0	25
			South	225	Brick	Light Blue	P-081-R22SB		<20	<20	<20	<20	<20	400	<20	<20	<20	400
			West	108	Painted Plywood	White	P-070-R22WPW		<2.0	<2.0	<2.0	<2.0	<2.0	21	<2.0	<2.0	<2.0	21
			West	108	Brick	Light Blue	P-071-R22WB		<20	<20	<20	<20	<20	280	<20	<20	<20	280
			North	225	Painted Plywood													
			North	225	Brick													
			Ceiling	300	2x4 wood	White	P-073-R22C		<4.0	<4.0	<4.0	<4.0	<4.0	67	<4.0	<4.0	<4.0	67
			Door	20		White	P-072-R2D	Sample ID was misprinted by field staff, but is applicable to Room 22	<20	<20	<20	<20	<20	200	<20	<20	<20	200
			Floor	300	Gray Painted Concrete													
		23	East	225	Concrete	Salmon/Dark Green	P-074-R23EC		<10	<10	<10	<10	<10	150	<10	<10	<10	150
					Brick	Salmon/Light Green/White	P-075-R23EB		<4.0	<4.0	<4.0	<4.0	<4.0	65	<4.0	<4.0	<4.0	65
			South	144	Concrete/Brick													
			West	225	Brick	Salmon/Light Green	P-077-R23W		<9.9	<9.9	<9.9	<9.9	<9.9	120	<9.9	<9.9	<9.9	120
			North	144	Brick	Salmon	P-078-R23N		<10	<10	<10	<10	<10	150	<10	<10	<10	150
			Ceiling	400	Pressed tin over lath	White	P-224-R23C		<45	<45	<45	<45	<45	950	<45	<45	<45	950
			Wood Trim	13		Dark Green/White	P-076-R23EWT		<10	<10	<10	<10	<10	92	<10	<10	<10	92
			Door	20		White/Dark Blue	P-079-R23D		<9.8	<9.8	<9.8	<9.8	<9.8	75	<9.8	<9.8	<9.8	75
			Floor	400	Gray Painted Concrete													

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	Basement	24	East	144	Brick	Salmon/White/Light Green	P-082-R24E		<9.8	<9.8	<9.8	<9.8	<9.8	120	<9.8	<9.8	<9.8	120
			South	135	Concrete	Beige/ Light Green	P-083-R24SC		<9.9	<9.9	<9.9	<9.9	<9.9	130	<9.9	<9.9	<9.9	130
					Brick	Beige/ Light Green	P-084-R24SB		<10	<10	<10	<10	<10	130	<10	<10	<10	130
			West	144	Brick	White/Light Green	P-085-R24W		<9.9	<9.9	<9.9	<9.9	<9.9	110	<9.9	<9.9	<9.9	110
			North	135	Unpainted plywood													
			Ceiling	240	Bare Lath													
			Door	20		White/Beige	P-256-R24D		<4.4	<4.4	<4.4	<4.4	33 J	27	<4.4	<4.4	<4.4	27
			Floor	240	Gray Painted Concrete													
		24A	East	54	None													
			South	135	Painted plywood	White/Beige	P-097-R24AS		<4.1	<4.1	<4.1	<4.1	<4.1	42	<4.1	<4.1	<4.1	42
			West	54	Brick	White/Light Green	P-098-R24AW		<18	<18	<18	<18	<18	200	<18	<18	<18	200
			North	135	Brick	Beige/ Light Green	P-099-R24AN		<9.8	<9.8	<9.8	<9.8	<9.8	150	<9.8	<9.8	<9.8	150
			Ceiling	90	Drywall		P-100-R24AC		<10	<10	<10	<10	<10	110	<10	<10	<10	110
			Floor	90	Gray Painted Concrete													
		25	East	108	Brick	White/ Light Green/ Maroon	P-086-R25E		<23	<23	<23	<23	<23	300	<23	<23	<23	300
			South	45	Brick		P-087-R25S		<10	<10	<10	<10	<10	90	<10	<10	<10	90
			West	108	Brick													
			North	45	Brick													
			Ceiling	60	Drywall	Beige	P-088-R25CDW		<7.5	<7.5	<7.5	<7.5	<7.5	66	<7.5	<7.5	<7.5	66
			Ceiling	60	Plaster/Lath	Beige	P-089-R25CP	Lab misprinted ID as P-089-R2**S**CP	<4.3	<4.3	<4.3	<4.3	<4.3	56	<4.3	<4.3	<4.3	56
			Door	20		Dark Blue	P-235-R25D		<4.5	<4.5	<4.5	<4.5	<4.5	19	<4.5	<4.5	<4.5	19
			Floor	60	Gray Painted Concrete													
		25A	East	90	Brick	Light Green	P-090-R25AE		<20	<20	<20	<20	<20	350	<20	<20	<20	350
			South	135	Brick	Light Green	P-091-R25AS		<20	<20	<20	<20	<20	380	<20	<20	<20	380
			West	90	Brick													
			North	135	Brick													
			Ceiling	150	Drywall	Beige	P-092-R25ACDW		<4.4	<4.4	<4.4	<4.4	<4.4	37	<4.4	<4.4	<4.4	37
			Ceiling	150	Plaster/Lath	Beige	P-093-R25ACP		<3.8	<3.8	<3.8	<3.8	<3.8	30	<3.8	<3.8	<3.8	30
			Floor	150	Gray Painted Concrete													
		26	East	108	Brick	White	P-101-R26E		<4.5	<4.5	<4.5	<4.5	<4.5	41	<4.5	<4.5	<4.5	41
			South	540	Concrete	White	P-102-R26SC		<4.0	<4.0	<4.0	<4.0	<4.0	80	<4.0	<4.0	<4.0	80
					Brick	White	P-103-R26SB		<4.3	<4.3	<4.3	<4.3	<4.3	36	<4.3	<4.3	<4.3	36
			West	108	CMU (newer), Drywall													
			North	540	CMU	White	P-104-R26N		<3.6	<3.6	<3.6	<3.6	<3.6	42	<3.6	<3.6	<3.6	42
			Ceiling	720	Drywall over lath	White	P-105-R26C		<3.5	<3.5	<3.5	<3.5	<3.5	7.9	<3.5	<3.5	<3.5	7.9
			Floor	720	Gray Painted Concrete													
		27	East	180	Unpainted CMU													
			South	585	CMU	White	P-106-R-27S		<5.0	<5.0	<5.0	<5.0	<5.0	42	<5.0	<5.0	<5.0	42
			West	180	None													
			North	90	CMU	White/Pink	P-107-R27NC		<4.8	<4.8	<4.8	<4.8	<4.8	30	<4.8	<4.8	<4.8	30
			North	495	Brick	White	P-108-R27NB		<3.6	<3.6	<3.6	<3.6	<3.6	50	<3.6	<3.6	<3.6	50
			Ceiling	1,300	None													
			Floor	1,300	Gray Painted Concrete													
		27A	East	180	Brick	Light Green/Red/White	P-109-R27AE		<4.5	<4.5	<4.5	<4.5	<4.5	12	<4.5	<4.5	<4.5	12
			South	45	None													
			West	180	CMU	White	P-110-R27AW		<4.4	<4.4	<4.4	<4.4	<4.4	23	<4.4	<4.4	<4.4	23
			North	45	Brick													
			Ceiling	100	None													
			Floor	100	Gray Painted Concrete													
		28	East	495	Bare wood/ none													
			South	153	Concrete	White	P-111-R28SC		<4.8	<4.8	<4.8	<4.8	<4.8	19	<4.8	<4.8	<4.8	19
					Brick	White	P-112-R28SB		<3.6	<3.6	<3.6	<3.6	<3.6	11	<3.6	<3.6	<3.6	11
			West	495	Concrete	Light Green/Pink/Light Blue	P-113-R28WC		<3.9	<3.9	<3.9	<3.9	<3.9	29	<3.9	<3.9	<3.9	29
					Brick	Light Green/Light Pink	P-114-R28WB		<4.8	<4.8	<4.8	<4.8	<4.8	16	<4.8	<4.8	<4.8	16
			North	153	None													
			Ceiling	935	None													
			Door	20		White/Light Green	P-115-R28D		<4.2	<4.2	<4.2	<4.2	<4.2	27	<4.2	<4.2	<4.2	27
			Floor	935	Unpainted Concrete													

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Interior	Basement	29	East	90	Bare wood													
			South	153	None													
			West	90	Concrete		P-116-29WC		<4.6	<4.6	<4.6	<4.6	<4.6	60	<4.6	<4.6	<4.6	60
					Brick		P-117-29WB		<4.4	<4.4	<4.4	<4.4	<4.4	17	<4.4	<4.4	<4.4	17
			North	153	Concrete		P-119-29NC		<4.5	<4.5	<4.5	<4.5	26	51	<4.5	<4.5	<4.5	77
					Brick	Light Green/Yellow	P-118-29NB		<3.9	<3.9	<3.9	<3.9	43	29	<3.9	<3.9	<3.9	72
			Ceiling	170	None													
			Floor	170	Unpainted Concrete													
		30	East	135	Brick	Light Green/White	P-120-R30E		<4.4	<4.4	<4.4	<4.4	<4.4	170	<4.4	<4.4	<4.4	170
			South	90	None													
			West	135	None													
			North	90	Concrete	Light Green/White	P-121-R30NC		<9.5	<9.5	<9.5	<9.5	<9.5	130	<9.5	<9.5	<9.5	130
					Brick	Light Green/White	P-122-R30NB		<8.8	<8.8	<8.8	<8.8	<8.8	94	<8.8	<8.8	<8.8	94
			Ceiling	150	Drywall over lath	White	P-123-R30C		<4.4	<4.4	<4.4	<4.4	<4.4	31	<4.4	<4.4	<4.4	31
			Floor	150	Gray Painted Concrete													
		31	East	135	None													
			South	135	None													
			West	135	Brick	Dark Green/White	P-124-R31W		<4.7	<4.7	<4.7	<4.7	<4.7	28	<4.7	<4.7	<4.7	28
			North	135	Concrete	White	P-125-R31NC		<22	<22	<22	<22	<22	160	<22	<22	<22	160
					Brick	Whitre	P-132-R31NB		<22	<22	<22	<22	<22	250	<22	<22	<22	250
			Ceiling	225	Unpainted drywall													
			Floor	225	Gray Painted Concrete													
		32	East	135	None													
			South	135	None													
			West	135	None													
			North	135	Concrete/Brick													
			Ceiling	225	Unpainted drywall													
			Floor	225	Gray Painted Concrete													
		33	East	135	Brick	Light Green	P-126-R33E	Misspelled in fig	<23	<23	<23	<23	<23	300	<23	<23	<23	300
			South	135	None													
			West	135	None													
			North	135	Concrete	Light Green/White	P-127-R33NC		<22	<22	<22	<22	<22	310	<22	<22	<22	310
					Brick	Light Green	P-237-R33NB		<24	<24	<24	<24	<24	320	<24	<24	<24	320
			Ceiling	225	Unpainted drywall													
			Floor	225	Gray Painted Concrete													
		34	East	135	Brick	Light Green	P-260-R34E		<20	<20	<20	<20	<20	200	<20	<20	<20	200
			South	90	CMU	White	P-261-R34S		<4.4	<4.4	<4.4	<4.4	<4.4	32	<4.4	<4.4	<4.4	32
			West	135	None													
			North	90	None													
			Ceiling	150	Drywall over lath	White	P-128-R34C		<4.9	<4.9	<4.9	<4.9	<4.9	43	<4.9	<4.9	<4.9	43
			Floor	150	Gray Painted Concrete													
		35	East	135	None													
			South	45	Brick	White/Light Green	P-245-R35S		<25	<25	<25	<25	<25	220	<25	<25	<25	220
			West	135	Brick	White/Light Green	P-129-R35W		<20	<20	<20	<20	<20	180	<20	<20	<20	180
			North	45	None													
			Ceiling	75	Pressed tin over lath	White/ Brown	P-238-R35C		<9.3	<9.3	<9.3	<9.3	<9.3	130	<9.3	<9.3	<9.3	130
			Floor	75	Gray Painted Concrete													
		36	East	135	None													
			South	90	Brick													
			West	135	None													
			North	90	None													
			Ceiling	150	Pressed tin over lath		P-246-R36C		<21	<21	<21	<21	<21	130	<21	<21	<21	130
			Floor	150	Gray Painted Concrete													
		37	East	135	Brick	Light Green	P-130-R37E		<20	<20	<20	<20	<20	400	<20	<20	<20	400
			South	270	Brick	Light Green	P-131-R37S		<24	<24	<24	<24	<24	270	<24	<24	<24	270
			West	135	None													
			North	270	None													
			Ceiling	450	Pressed tin over lath	White/Brown	P-241-R37C		<3.5	<3.5	<3.5	<3.5	<3.5	65	<3.5	<3.5	<3.5	65
			Floor	450	Gray Painted Concrete													

Exterior/ Interior	Floor	Room	Direction	Approx. SF	Substrate	Color	KGSNE Sample ID	Comments	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
Exterior	N/A	Front Entrance - Surround		50	Wood	White painted	P-169-Ex		<0.47	<0.47	<0.47	<0.47	<0.47	1.8	<0.47	<0.47	<0.47	1.8
							P-170-Ex		<0.48	<0.48	<0.48	<0.48	<0.48	1	<0.48	<0.48	<0.48	1
							P-171-Ex		<0.49	<0.49	<0.49	<0.49	<0.49	1.7	<0.49	<0.49	<0.49	1.7
		Front Entrance - Door		64	Wood	Dark Green painted	P-178-Ex		<0.93	<0.93	<0.93	<0.93	<0.93	2.4	<0.93	<0.93	<0.93	2.4
							P-179-Ex		<0.97	<0.97	<0.97	<0.97	<0.97	1.8	<0.97	<0.97	<0.97	1.8
							P-180-Ex		<0.92	<0.92	<0.92	<0.92	<0.92	3	<0.92	<0.92	<0.92	3
		Front Entrance		100	Concrete	White painted	P-203-Ex	No white paint on front exterior except for 1916 cornerstone	<0.089	<0.089	<0.089	<0.089	<0.089	0.5	<0.089	<0.089	<0.089	0.5
		North basement stairwell		200	Concrete	Multi-color painted	P-172-Ex		<900	<900	<900	<900	<900	9,700	<900	<900	<900	9,700
							P-173-Ex		<1,400	<1,400	<1,400	<1,400	<1,400	7,100	<1,400	<1,400	<1,400	7,100
							P-174-Ex		<3,400	<3,400	<3,400	<3,400	<3,400	20,000	<3,400	<3,400	<3,400	20,000
		Front Steps Handrails		40 LF	Metal	Black painted	P-181-Ex		<2.3	<2.3	<2.3	<2.3	11	11	<2.3	<2.3	<2.3	22
							P-182-Ex		<2.0	<2.0	<2.0	<2.0	8.8	12	<2.0	<2.0	<2.0	20.8
							P-183-Ex		<2.1	<2.1	<2.1	<2.1	13	12	<2.1	<2.1	<2.1	25
		Window Frames		80	Wood	White painted	P-175-Ex		<0.43	<0.43	<0.43	<0.43	<0.43	1.8	<0.43	<0.43	<0.43	1.8
							P-176-Ex		<0.47	<0.47	<0.47	<0.47	<0.47	0.6	<0.47	<0.47	<0.47	0.6
							P-177-Ex		<0.47	<0.47	<0.47	<0.47	<0.47	0.72 J	<0.47	<0.47	<0.47	0.7
		Window Sashes		80	Wood	Dark Green painted	P-262-Ex		<3.6	<3.6	<3.6	<3.6	<3.6	70	<3.6	<3.6	<3.6	70
							P-263-Ex		<8.7	<8.7	<8.7	<8.7	<8.7	160	<8.7	<8.7	<8.7	160
							P-264-Ex		<4.1	<4.1	<4.1	<4.1	<4.1	180	<4.1	<4.1	<4.1	180
		Ceiling of North central roof over steps		150	Wood	White painted	P-166-Ex		<0.95	<0.95	<0.95	<0.95	<0.95	5.7	<0.95	<0.95	<0.95	5.7
							P-167-Ex		<0.96	<0.96	<0.96	<0.96	<0.96	4.5	<0.96	<0.96	<0.96	4.5
							P-168-Ex		<0.46	<0.46	<0.46	<0.46	<0.46	1	<0.46	<0.46	<0.46	1
		Roof Edge Trim/Soffits		400	Wood	White/gray painted	P-190-Ex		<0.45	<0.45	<0.45	<0.45	<0.45	1.1 J	<0.45	<0.45	<0.45	1.1
							P-191-Ex		<0.44	<0.44	<0.44	<0.44	<0.44	1	<0.44	<0.44	<0.44	1
							P-192-Ex		<0.41	<0.41	<0.41	<0.41	<0.41	1.7	<0.41	<0.41	<0.41	1.7
		Southwest Loading Ramp		600	Concrete	Gray painted	P-184-Ex		<200	<200	<200	<200	<200	7,500	<200	<200	<200	7,500
							P-185-Ex		<230	<230	<230	<230	<230	7,700	<230	<230	<230	7,700
							P-186-Ex		<220	<220	<220	<220	<220	9,600	<220	<220	<220	9,600
		Southwest Loading Ramp Roof		300	Wood Trim/Soffit/Door & Sheet Metal walls	White painted	P-187-Ex		<4.3	<4.3	<4.3	<4.3	<4.3	38	<4.3	<4.3	<4.3	38
							P-188-Ex		<8.1	<8.1	<8.1	<8.1	<8.1	110	<8.1	<8.1	<8.1	110
							P-189-Ex		<21	<21	<21	<21	<21	360	<21	<21	<21	360
		East concrete window sills under green painted sashes		N/A	Concrete	Not painted	P-299-Ex		<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	--
							P-300-Ex		<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	<0.098	--
							P-301-Ex		<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	--
		North concrete window sills under green painted sashes		N/A	Concrete	Not painted	P-302-Ex		<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	--
							P-303-Ex		<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	--
							P-304-Ex		<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	--
		South concrete window sills under green painted sashes		N/A	Concrete	Not painted	P-332-Ex		<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	<0.091	--
							P-333-Ex		<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	--
							P-334-Ex		<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	--

Notes:
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling* , 2023
LF = linear feet
SF = square feet
'--' = indicates all results for that sample were non-detect.
All results reported in ppm
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the samples.
Red shading indicates the material did not exist
Tan shading indicates the material contains a total PCB concentration over 50 ppm
Gray shading indicates the material was not selected to be sampled in the original sample plan by Atlas. The materials are still shown in the Atlas Workplan tables and were carried over for continuity.

Table 2-2
Lead Waste Characterization Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont

Waste Characterization Composite Sample Identification	Exterior/Interior	Floor	Room	Direction	Substrate	Color	Former Sample ID to Collect Adjacent Grab Sample	Lead Result (mg/L)
WC-Lead-Comp 1	Interior	Basement	26	Floor	Concrete	Blue	PCB-20C (note-historic sample location unknown, sample blue floor paint)	5.7
	Interior	Basement	23	Floor	Concrete	Grey	PCB-16D (note-historic sample location unknown, sample grey floor paint)	
	Interior	1st floor	15	South	Plaster/Lath	Pink, Green, White, Brown	P-236-R15S	
	Interior	2nd Floor	6	Floor	Wood	Brown	P-023-R06F	
	Exterior	N/A	N/A	Southwest Loading Ramp Roof	Wood Trim/Soffit/Door & Sheet Metal walls	White	P-188-Ex (Note-sample white painted wood trim)	
WC-Lead-Comp 2	Interior	Basement	18	North	Sheet Metal walls	White/Green/Drk. Grey	P-051-R18NC	15
	Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	
	Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	
	Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-056-R20NC	
WC-Lead-Comp 3	Interior	Basement	21	East	Brick	Pink/Lt. Green/Brown	P-058-R21EB	28
	Interior	Basement	21	West	Brick	Blue/Lt. Green	P-094-R21W	
	Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	
	Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-086-R25E	
WC-Lead-Comp 4	Interior	Basement	22	South	Painted Plywood	Yellow/Drk. Blue	P-080-R22SPW	0.21
	Interior	1st floor	Gym	East	Cellotex	Lt Green - high	P-265-R17EC1	
	Interior	2nd Floor	8	South	Plaster/Lath	Yellow	P-031-R09S	
	Exterior	N/A	N/A	Front Entrance - Surround	Wood	Dark Green	P-178-Ex	
	Exterior	N/A	N/A	Roof Edge Trim/Soffits	Wood	White/Gray	P-190-Ex	
WC-Lead-Comp 5	Interior	Basement	Stairwell 0-1	Ceiling	Drywall	White	P-066-S01C	0.63
	Interior	1st floor	15	Ceiling	Plaster/Lath	Beige/Pink/Brown	P-211-R15CP	
	Interior	2nd Floor	5	Behind wall panneling in Room 5	Gray adhesive associated with brown, faux wood wall paneling	Gray	A-006a-R5	
	Exterior	N/A	Roof	Chimney	Light gray horizontal caulk (#5)	Light gray	P-281-Ex	
	Exterior	N/A	Roof	silver paint assciated with metal roofing	Tin	Silver	A-022a	

Notes:
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling* , 2023
mg/L = milligrams per liter

Table 2-3
Asbestos Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont
Page 1 of 3

Medium/ Area	Material ID	Material & Description	Material Location(s)	Quantity	Recommended Sample Locations	KGSNE Sample ID	Asbestos Percent Type
Caulking	1	Black caulk	Exterior; Between back edge of soffit and brick wall below; north and south sides of building	175 LF	Roofline - north side		
	2	White caulk	Exterior; Roofline intersection (sloping portion) between east and west portions of building, at top of metal flashing and in joint between roof and wall	20 LF	Roofline - north side	A-023a	2% Chrysotile
						A-023b	Positive Stop
	3	Flashing caulk	Exterior; Small roof over southwest loading ramp roofline intersection with brick wall, at top of metal flashing	20 LF	SW Corner Ramp Roof	A-021a	2% Chrysotile
						A-021b	Positive Stop
						A-021c	Positive Stop
	4	Caulk (if present)	Over central stair to basement; roofline intersection with brick wall	20 LF	Small roof over north central stair to basement		
	5	Light gray horizontal caulk	Roof - chimney	10 LF	Roof - chimney	A-024a	3% Chrysotile
						A-024b	Positive Stop
	6	Yellow caulking around interior door trim	Room 17 (gym) between exit door frame and interior brick, north side of gym	20 LF	Room 17 (gym)	A-016a-R17	--
						A-016b-R17	--
Roofing	7	Asphalt shingle	Eastern end of western portion of building - upper wall on roof level adjacent to flat roof - under slate wall shingles	200 SF	At material location	A-025a	--
						A-025b	--
	8 & 9	Roof paper (brown & black [tar])	Eastern end of western portion of building - upper wall on roof level adjacent to flat roof - under slate wall shingles	200 SF	At material location	A-026a	--
						A-026b	--
						A-045a	--
						A-045b	--
	10	Material(s) (including tar paper) that may be present under gambrel slate	Gambrel roof - under slate	~6,000 SF	Gambrel roof - top. Conduct exploratory work under slate.	A-027a	10% Chrysotile
		Built up tar paper				A-027b	Positive Stop
	10a	asphalt layer				A-028a	6% Chrysotile
						A-028b	Positive Stop
	10b	rubber roofing membrane				A-029a	--
						A-029b	--
	10c	fiberboard				A-030a	--
						A-030b	--
	11	Rubber roofing adhesive	Throughout flat roof, eastern portion of building, seams, corners, various locations	100 SF	Flat roof, eastern portion of building		
	12	Rubber roofing patch adhesive - if present	Flat roof, eastern portion of building, patches (if present)	20 SF	Flat roof, eastern portion of building	A-031a	--
						A-031b	--
						A-031c	--
	13	Asphalt roof repair sheeting	North side of gambrel roof	~2,000 SF	Gambrel roof - north side		
Interior	14	Celotex board	Rooms 6 (loose panels), 10 (walls of closet)	100 SF	Room 6, 10	A-002a-R10	--
						A-002b-R06	--
	15	Thin wall panels	Room 10, 16	~700 SF	Room 10, 16	A-003a-R10	--
						A-003b-R16	--
	16	Ceiling panels, if not wood/plywood	Room 17 (gym)	~6,000 SF	Room 17	A-032a	--
						A-032b	--
	17	Insulation, if any, behind ceiling panels	Room 17 (gym)	~6,000 SF	Room 17		
	18	Wood paneling - backing paper	Room 5	480 SF	Room 5		
	19	Black paper (L side of middle window below sill)	Room 5, behind wood paneling (observed in gap between window trim and paneling)	Up to 480 SF	Room 5		

Table 2-3
Asbestos Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont
Page 2 of 3

Medium/ Area	Material ID	Material & Description	Material Location(s)	Quantity	Recommended Sample Locations	KGSNE Sample ID	Asbestos Percent Type
Interior	20	Drywall	Walls, ceilings, in-fill panels, around ductwork. Throughout building. Sometimes multiple layers. Includes rooms: 3, 6, 7, 12, 13, 14, 17, 18, 20, 21, 25, 26, 23/24 hallway, 27/bathroom hallway, 28, 30-37 hallway; 30, 31, 32, 33, 34, 35, 36, 37, basement stairs	~6,400 SF	Rooms 3, 7, 12, 14, 18, 21, 34 (2 samples in each room)	A-017a-R03	--
						A-017b-R03	--
						A-039a-R07	--
						A-039b-R07	--
						A-040a-R12	--
						A-040b-R12	--
						A-041a-R14	--
						A-041b-R14	--
						A-042a-R18	--
						A-042b-R18	--
						A-043a-R21	--
						A-043b-R21	--
						A-044a-R34	--
						A-044b-R34	--
	21	Joint compound	Rooms 6, 7, 12, 13, 14, 26, basement stair landing (where drywall is painted)	~900 SF	Room 6, 7, 14	A-020a-R06	2% Chrysotile
						A-020b-R06	Positve Stop
						A-035a-R07	2% Chrysotile
						A-035b-R07	Positve Stop
						A-036a-R12	--
						A-036b-R12	--
						A-037a-R14	--
						A-037b-R14	--
						A-038a-R28	--
						A-038b-R28	--
	22	Joint compound	Room 3 (patch)	5 SF	Room 3 (all samples)		
	23	Sprinkler fitting thread sealant	Room 20, 21, 26 (closet)	<1 SF, several	Room 20, 21	A-012a-R20	--
						A-012b-R21	--
	24	Beige mastic	Room 13, 14, on wood floor	284 SF	Room 13, 14	A-014a-R13	--
						A-014b-R14	--
	25	White sub-floor plaster-like filler	Room 14, under wood floor	Max 230 SF	Room 14	A-005a-R14	--
						A-005b-R14	--
	26	Carpet mastic	Room 12, remnant fibers on wood floor	Max 360 SF	Room 12	A-015a-R12	--
						A-015b-R12	--
	27	Yellow mastic	Room 22, 27, 30-37, on concrete	~3,900 SF	Room 22, 27	A-001a-R22	--
						A-001b-R27	--
	28	Black mastic	Room 18, on underside of VFT	340 SF	Room 18	A-013a-R18	10% Chrysotile
						A-013b-R18	Positive Stop
	29	Leveling compound	Room 27, 34	80 SF	Room 27, 34	A-011a-R34	--
						A-011b-R27	--
						A-011c-R27	--
	30	Ceramic Tile thinset	Room 23, floor	100 SF	Room 23	A-010a-R23	--
						A-010b-R23	--
	31	Ceramic Tile grout	Room 23, floor	100 SF	Room 23	A-004a-R23	--
						A-004b-R23	--
	32	Ceramic Tile	Room 23, floor	100 SF	Room 23	A-009a-R23	--
						A-009b-R23	--
		Materials, if any, beneath Ceramic Tile	Room 23, floor	100 SF	Room 23		
	33	Gray battleship linoleum	Room 15	75 SF	Room 15	A-007a-R15	--
						A-007b-R15	--
		Brown mastic assoc. with old "Battleship" linoleum				A-008a-R15	--
						A-008b-R15	--

Table 2-3
Asbestos Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont

Medium/ Area	Material ID	Material & Description	Material Location(s)	Quantity	Recommended Sample Locations	KGSNE Sample ID	Asbestos Percent Type
Exterior		Foundation Waterproofing	Exterior of foundation	Unknown	Exterior of foundation		
		Materials behind brick façade, if any (paper, mastic, insulation)	Behind brick façade	Unknown	3 samples of each identified material		
Additional KGSNE Samples	N/A	Gray adhesive associated with brown, faux wood wall paneling	Behind wall panneling in Room 5		Room 5	A-006a-R5	5% Chrysotile
						A-006b-R5	Positive Stop
						A-006c-R5	Positive Stop
	N/A	Brick mortar	Exterior on all sides		N/A	A-018a-N	--
						A-018b-W	--
						A-018c-S	--
	N/A	Concrete Slab in basement	N/A		Room 32	A-019a-R32[1]	--
					Room 37	A-019b-R37	--
					Room 28	A-019c-R28	--
	N/A	Silver paint associated with metal roofing; Reference Material #3	Exterior; Southwest loading dock		N/A	A-022a	3% Chrysotile
						A-022b	Positive Stop
						A-022c	Positive Stop
	N/A	Gray caulking on east facing window of patch roof; Reference Material #8 & 9	Exterior		N/A	A-033a	--
						A-033b	--
	N/A	Built up roofing under flat roof (#12)	Exterior		N/A	A-034a	2% Chrysotile
						A-034b	Positive Stop

Notes:
1. Sample was labeled A-019a-R23 in the field but was collected from Room 32.
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling*, 2023
LF = linear feet
SF = square feet
'--' = indicates the results for that sample were non-detect.
Red shading indicates the material did not exist

Table 2-4
PCB Bulk Material Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont

KGSNE Sample ID	Material Type / Material ID	Material Description	Material Location	Quantity of Material	Location(s) of Samples	Arolclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total Aroclors
	Caulk / #1	Caulk bead – characteristics unknown	Exterior - Between back edge of soffit and brick wall; north and south sides of building; a portion is hanging down on north side	70 LF	North side of building										
				70 LF	South side of building										
P-275-Ex	Caulk / #2	White	Exterior – Roofline intersection (sloping portion) between east and west portions of building, at top of metal flashing and in joint between roof and wall.	30 LF	North side of building	<0.70	<0.70	<0.70	<0.70	<0.70	5.9	<0.70	<0.70	<0.70	5.9
P-276-Ex						<3.6	<3.6	<3.6	<3.6	<3.6	17	<3.6	<3.6	<3.6	17
P-277-Ex						<3.7	<3.7	<3.7	<3.7	<3.7	10	<3.7	<3.7	<3.7	10
P-278-Ex	Caulk / #3	White	Exterior – Small roof over southwest loading ramp roofline intersection with brick wall, at top of metal flashing.	10 LF	Southwest side of building over loading ramp	<0.77	<0.77	<0.77	<0.77	<0.77	1.4	<0.77	<0.77	<0.77	1.4
P-279-Ex						<0.76	<0.76	<0.76	<0.76	<0.76	1.6	<0.76	<0.76	<0.76	1.6
P-280-Ex						<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	-
	Caulk (if present) / #4	Characteristics Unknown	Exterior – Small roof over central steps to basement; at roofline intersection with brick wall.	15 LF	Small roof over north central stair to basement										
P-281-Ex	Caulk / #5	White	Chimney – Copper Flashing – along top edge	1 LF	Chimney	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	-
P-282-Ex						<0.73	<0.73	<0.73	<0.73	<0.73	0.8	<0.73	<0.73	<0.73	0.8
P-283-Ex						<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	-
P-284-R6	Celotex board / #14	Brown fibrous board	Room 6 (loose panels), Room 10 (walls of closet). Collect samples of unpainted material.	100 SF	Room 6 (loose panels), Room 10 (walls of closet)	<0.89	<0.89	<0.89	<0.89	<0.89	2.6	<0.89	<0.89	<0.89	2.6
P-285-R6						<0.98	<0.98	<0.98	<0.98	<0.98	2.2 J	<0.98	<0.98	<0.98	2.2
P-286-R10						<0.90	<0.90	<0.90	<0.90	<0.90	1.6	<0.90	<0.90	<0.90	1.6
	Black Paper / #19	Black	Room 5, behind wood paneling? (observed in gap between window trim and paneling)	Up to 480 SF	Room 5										
P-287-R13	Beige Mastic / #24	Beige	Room 13, 14, on wood floor	284 SF	Room 13, 14	<0.96	<0.96	<0.96	<0.96	<0.96	4.3	<0.96	<0.96	<0.96	4.3
P-288-R13						<0.88	<0.88	<0.88	<0.88	<0.88	2.2	<0.88	<0.88	<0.88	2.2
P-289-R14						<2.0	<2.0	<2.0	<2.0	<2.0	11	<2.0	<2.0	<2.0	11
P-290-R12	Carpet Mastic / #26	Remnant carpet mastic	Room 12, remnant carpet fibers on wood floor	Up to 360 SF	Room 12	<0.93	<0.93	<0.93	<0.93	<0.93	3.3	<0.93	<0.93	<0.93	3.3
P-291-R12						<0.74	<0.74	<0.74	<0.74	<0.74	2.7	<0.74	<0.74	<0.74	2.7
P-292-R12						<0.97	<0.97	<0.97	<0.97	<0.97	3.4	<0.97	<0.97	<0.97	3.4
P-293-R18	Black Mastic / #28	Black, VCT mastic	Room 18, on underside of VFT	340 SF	Room 18	<970	<970	<970	<970	<970	5,700	<970	<970	<970	5,700
P-294-R18						<800	<800	<800	<800	<800	4,600	<800	<800	<800	4,600
P-295-R18						<960	<960	<960	<960	<960	6,800	<960	<960	<960	6,800
P-296-R15	Old Linoleum Mastic / #33	Unknown	Room 15, may be present beneath old “Battleship” linoleum	75 SF	Room 15	<0.93	<0.93	<0.93	<0.93	<0.93	7.6	<0.93	<0.93	<0.93	7.6
P-297-R15						<0.93	<0.93	<0.93	<0.93	<0.93	13	<0.93	<0.93	<0.93	13
P-298-R15						<0.90	<0.90	<0.90	<0.90	<0.90	12	<0.90	<0.90	<0.90	12

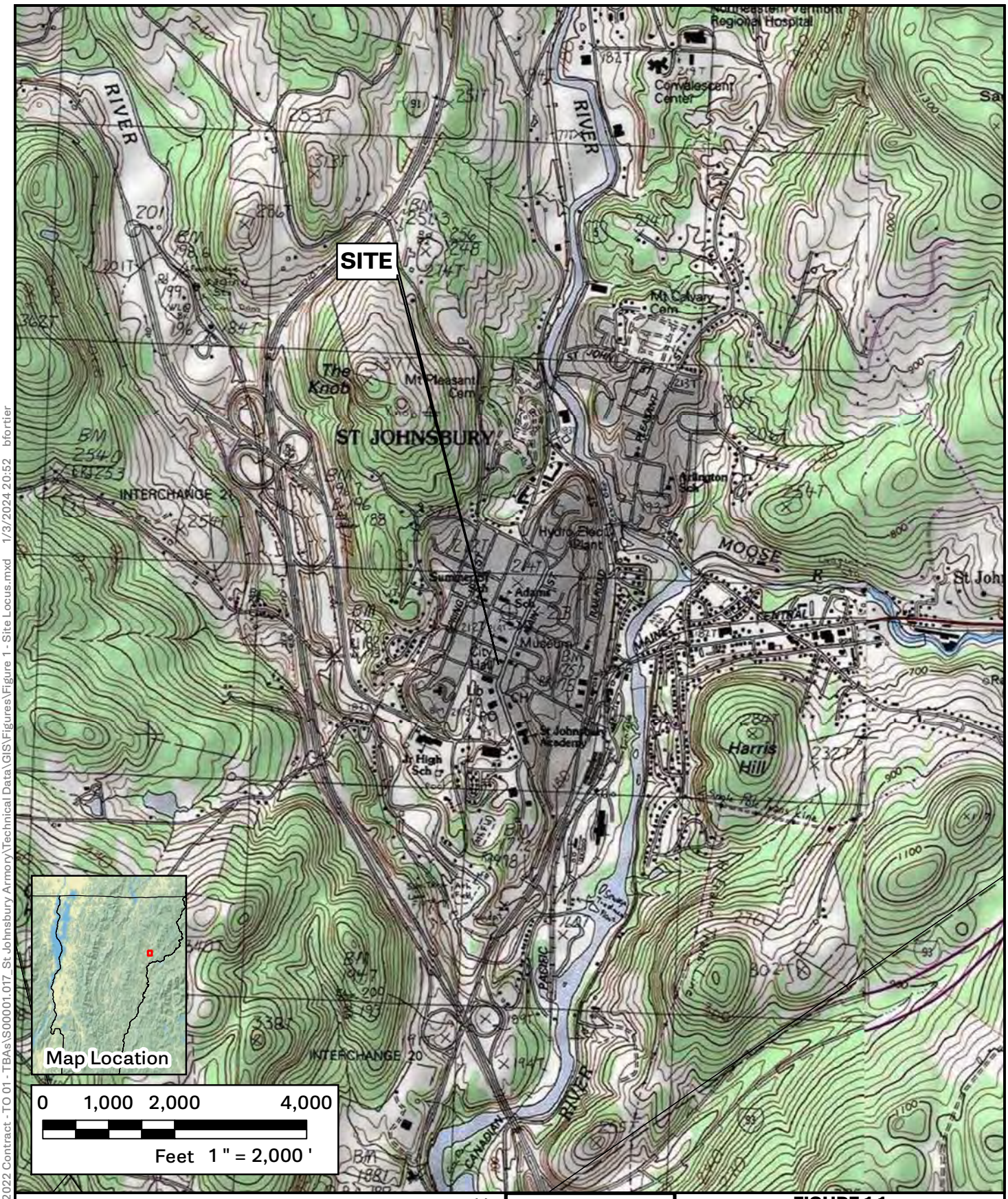
Notes:
Material IDs and Room numbers from Atlas Technical Consultants *Workplan for Additional Hazardous Building Materials Sampling* , 2023
LF = linear feet
SF = square feet
All results reported in ppm
Red shading indicates the material did not exist
Tan shading indicates the material contains a total PCB concentration over 50 ppm
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the samples.

Table 2-5
PCB Soil Sample Results
St. Johnsbury Armory
St. Johnsbury Vermont

Boring ID	KGSNE Sample ID	Depth (Ft. bgs)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs
SUBSLAB SOIL SAMPLES												
P-269	P-269-R23SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-270	P-270-R27SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-271	P-271-R25ASS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-272	P-272-R21SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
P-273	P-273-R31SS	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
EXTERIOR SOIL SAMPLES												
P-305-Ex	P-305-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-306-Ex	P-306-Ex-000.5	0 - 0.5	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	--
P-307-Ex	P-307-Ex-000.5	0 - 0.5	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	--
P-308-Ex	P-308-Ex-000.5	0 - 0.5	<0.090	<0.090	<0.090	<0.090	<0.090	0.22	<0.090	<0.090	<0.090	0.22
	P-308-Ex-0.501	0.5 - 1	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-309-Ex	P-309-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-310-Ex	P-310-Ex-000.5	0 - 0.5	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	--
P-311-Ex	P-311-Ex-000.5	0 - 0.5	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	--
P-312-Ex	P-312-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	--
P-313-Ex	P-313-Ex-000.5	0 - 0.5	<0.090	<0.090	<0.090	<0.090	<0.090	0.13	<0.090	<0.090	<0.090	0.13
	P-313-Ex-0.501	0.5 - 1	<0.083	<0.083	<0.083	<0.083	<0.083	0.15	<0.083	<0.083	<0.083	0.15
	P-313-Ex-0101.5	1 - 1.5	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	--
P-314-Ex	P-314-Ex-000.5	0 - 0.5	<0.093	<0.093	<0.093	<0.093	<0.093	0.29 J	<0.093	<0.093	<0.093	0.29
	P-314-Ex-0.501	0.5-1	<0.087	<0.087	<0.087	<0.087	<0.087	0.10	<0.087	<0.087	<0.087	0.10
P-315-Ex	P-315-Ex-000.5	0 - 0.5	<0.45	<0.45	<0.45	<0.45	<0.45	1.3 J	3.1	<0.45	<0.45	4.4
	P-315-Ex-0.501	0.5 - 1	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	1.3	<0.085	<0.085	1.3
	P-315-Ex-0101.5	1 - 1.5	<0.087	<0.087	<0.087	<0.087	<0.087	<0.087	0.097	<0.087	<0.087	0.097
P-316-Ex	P-316-Ex-000.5	0 - 0.5	<0.090	<0.090	<0.090	<0.090	<0.090	0.32	<0.090	<0.090	<0.090	0.32
	P-316-Ex-0.501	0.5 - 1	<0.086	<0.086	<0.086	<0.086	<0.086	0.11	<0.086	<0.086	<0.086	0.11
P-317-Ex	P-317-Ex-000.5	0 - 0.5	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	--
P-318-Ex	P-318-Ex-000.5	0 - 0.5	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	--
P-319-Ex	P-319-Ex-000.5	0 - 0.5	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	--
P-320-Ex	P-320-Ex-000.5	0 - 0.5	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	--
P-321-Ex	P-321-Ex-000.5	0 - 0.5	<0.080	<0.080	<0.080	<0.080	<0.080	0.36	<0.080	<0.080	<0.080	0.36
	P-321-Ex-0.501	0.5 - 1	<0.083	<0.083	<0.083	<0.083	<0.083	0.20	<0.083	<0.083	<0.083	0.20
P-322-Ex	P-322-Ex-000.5	0 - 0.5	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	--
P-323-Ex	P-323-Ex-000.5	0 - 0.5	<0.085	<0.085	<0.085	<0.085	<0.085	0.52	<0.085	<0.085	<0.085	0.52
	P-323-Ex-0.501	0.5 - 1	<0.083	<0.083	<0.083	<0.083	<0.083	0.23	<0.083	<0.083	<0.083	0.23
P-324-Ex	P-324-Ex-000.5	0 - 0.5	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	--
P-325-Ex	P-325-Ex-000.5	0 - 0.5	<0.083	<0.083	<0.083	<0.083	<0.083	0.096	<0.083	<0.083	<0.083	--
P-326-Ex	P-326-Ex-000.5	0 - 0.5	<0.084	<0.084	<0.084	<0.084	<0.084	0.17	<0.084	<0.084	<0.084	0.17
	P-326-Ex-0.501	0.5 - 1	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	<0.082	--
P-327-Ex	P-327-Ex-000.5	0 - 0.5	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	--
P-328-Ex	P-328-Ex-0606.5	6 - 6.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--

Notes:
All results reported in ppm
The intervals at the end of the KGSNE Sample ID correspond to the depth interval, in feet (eg 000.5 corresponds to 0-0.5 interval)
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the samples.

FIGURES



USGS Topographic Map
St. Johnsbury Vermont
Revised 1983

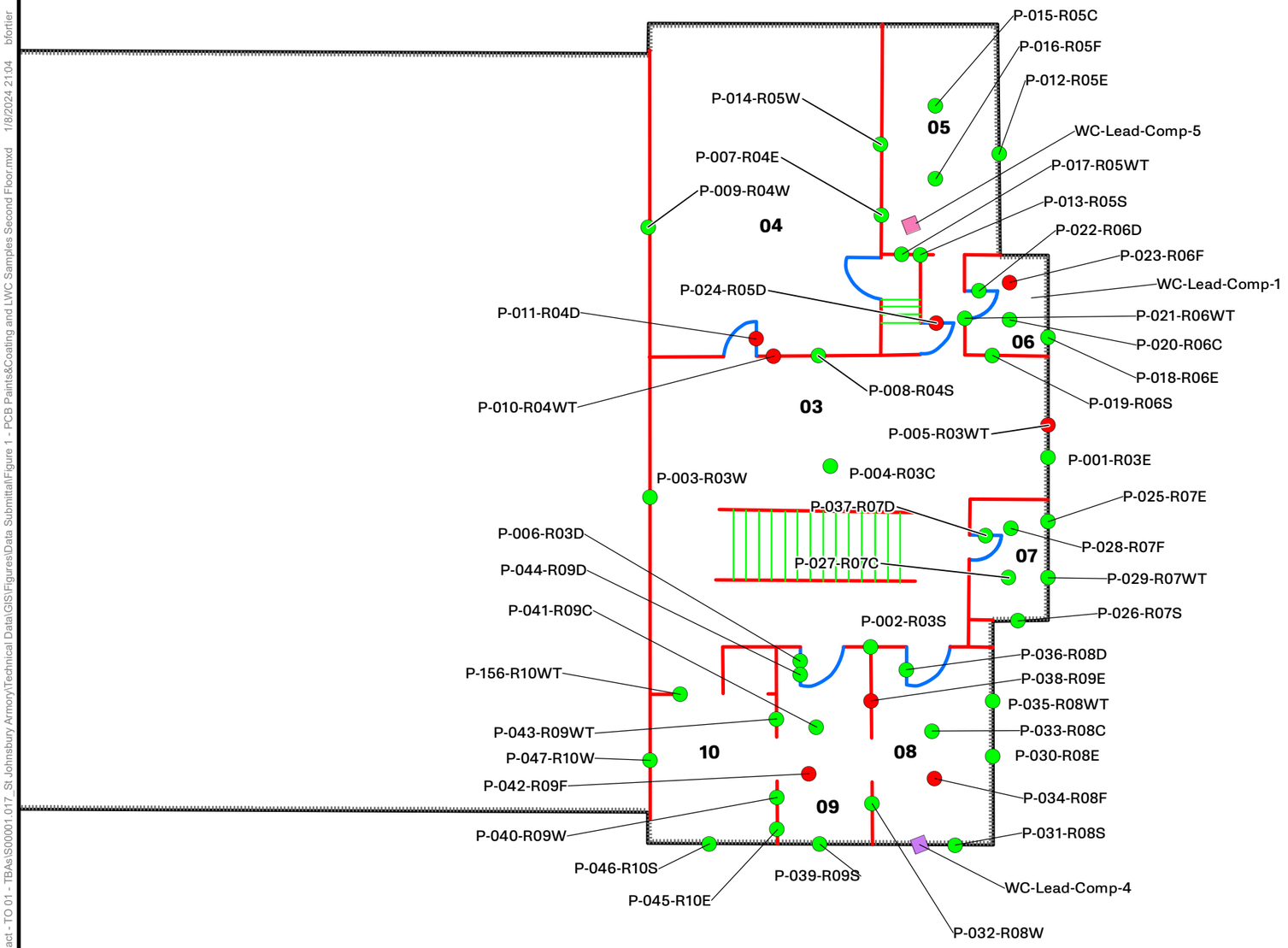
KGSNE

FIGURE 1-1

SITE LOCUS
ST JOHNSBURY ARMORY
1249 MAIN STREET
ST. JOHNSBURY VT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Figure 1 - Site Locus.mxd 1/3/2024 20:52 bfortier



Notes:

1.Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

Lead Composite Samples

- WC-Lead-Comp-1
- WC-Lead-Comp-4
- WC-Lead-Comp-5

PCB Paints/Coating Samples

- Total PCBs < 50 ppm
- Total PCBs > 50 ppm
- Building Footprint

Building Layout

- 2nd Floor Door
- 2nd Floor Stairs
- 2nd Floor Wall

0 5 10 20

Feet
1 inch = 10 feet

N

KGSNE

FIGURE 2-1a

PCB PAINTS & COATINGS
AND LEAD COMPOSITE SAMPLES
SECOND FLOOR
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 1 - PCB Paints&Coating and LWC Samples Second Floor.mxd 1/8/2024 21:04 bfortier

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 2 - PCB Paints&Coating and LWC Samples First Floor.mxd 1/8/2024 12:33 bfortier

P-163-R14WDW
P-243-R12NDW
P-240-R13D
P-242-R12-CP
P-247-R12NP
P-232-R13F
P-213-R12CPB
P-216-R13CP
P-214-R12CDW
P-230-R13CWP
P-136-GN
P-233-R13E
P-225-R13S
13
P-145-EWP1
P-148-EPB1
P-151-EP1
P-218-R13WT
P-137-GFN
14
P-219-R14EDW
12
P-227-R14EP
P-193-GC
P-195-GC
P-206-R17W
P-249-R14WP
P-229-R14CDW
P-194-GC
P-251-R12EW
P-160-R14CWP
P-142-GFDG
P-244-R12EDW
P-208-R14CP
P-146-EWP2
P-149-EPB2
P-152-EP2
P-144-GFW
P-234-R12F
P-154-R14F
P-255-R14SP
P-141-GFC
P-162-R12SDW
P-226-R14SDW
P-205-R17W
P-164-R11WP
P-258-R11WDW
P-159-R14WT
P-199
P-201
P-202
P-228-R12WT
P-200
P-157-R11F
11
P-254-R11CDW
17
P-250-R11D
P-138-GFE
P-231-R11CP
P-158-R11EDW
P-140-GFW
P-248-R11WT
P-223-S12N
P-212-R11EP
P-217-R11SDW
WC-Lead-Comp-5
P-143-GFLG
P-274-S12R
15
P-253-R15D
P-220-S12C
P-265-R17EC1
P-267-R17EC3
P-259-R15E
P-147-EWP3
P-150-EPB3
P-153-EP3
P-211-R15CP
P-139-GFS
P-221-R15WT
P-204-R17W
16
P-215-R15CPW
P-198-GC
P-155-S12F
P-236-R15S
P-197-GC
WC-Lead-Comp-1
P-196-GC
P-257-S12S
P-165-R16D
WC-Lead-Comp-4
P-222-R16NP
P-134-R16EW
P-266-R17EC2
P-268-R17EC4
P-210-R16NWP
P-133-R16EP
P-252-R17S
P-207-R16C
P-135-R16WT
P-161-R16SWP
P-209-R16SP

Notes:

1.Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

PCB Paints/Coating Samples

- Total PCBs < 50 ppm
- Total PCBs > 50 ppm

Lead Composite Samples

- WC-Lead-Comp-1
- WC-Lead-Comp-4
- WC-Lead-Comp-5
- Building Footprint

Building Layout

- 1st Floor Door
- 1st Floor Stairs
- 1st Floor Wall

0 5 10 20
Feet
1 inch = 10 feet

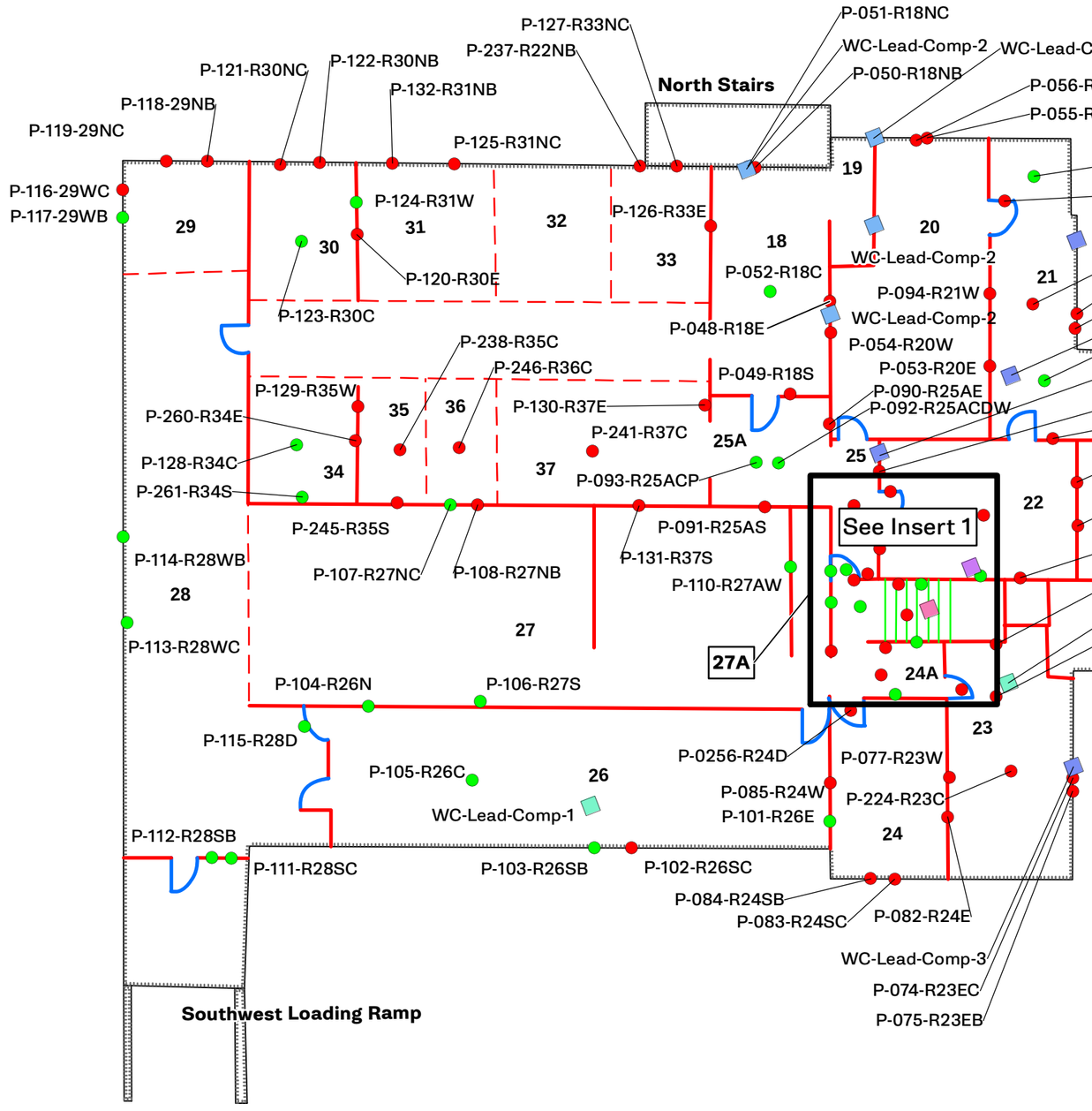
N

KGSNE

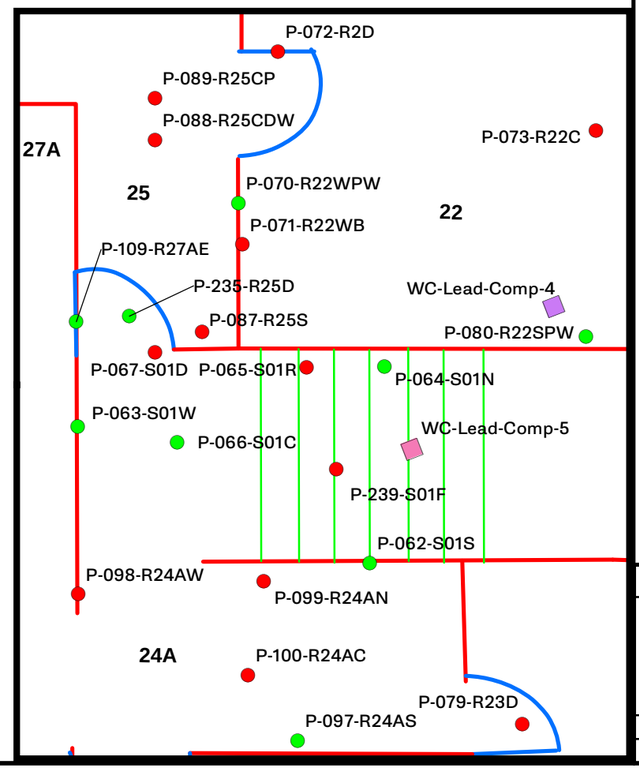
FIGURE 2-1b

PCB PAINTS & COATINGS
AND LEAD COMPOSITE SAMPLES
FIRST FLOOR
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024



Insert 1



Notes:

1. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

PCB Paints/Coating Samples

- Total PCBs < 50 ppm
- Total PCBs > 50 ppm

Lead Composite Samples

- WC-Lead-Comp-1
- WC-Lead-Comp-2
- WC-Lead-Comp-3
- WC-Lead-Comp-4
- WC-Lead-Comp-5
- Basement Footprint

Building Layout

- Basement Door
- Basement Stairs
- Basement Wall
- Former Basement Wall

0 7.5 15 30

Feet

1 inch = 15 feet

N

KGSNE

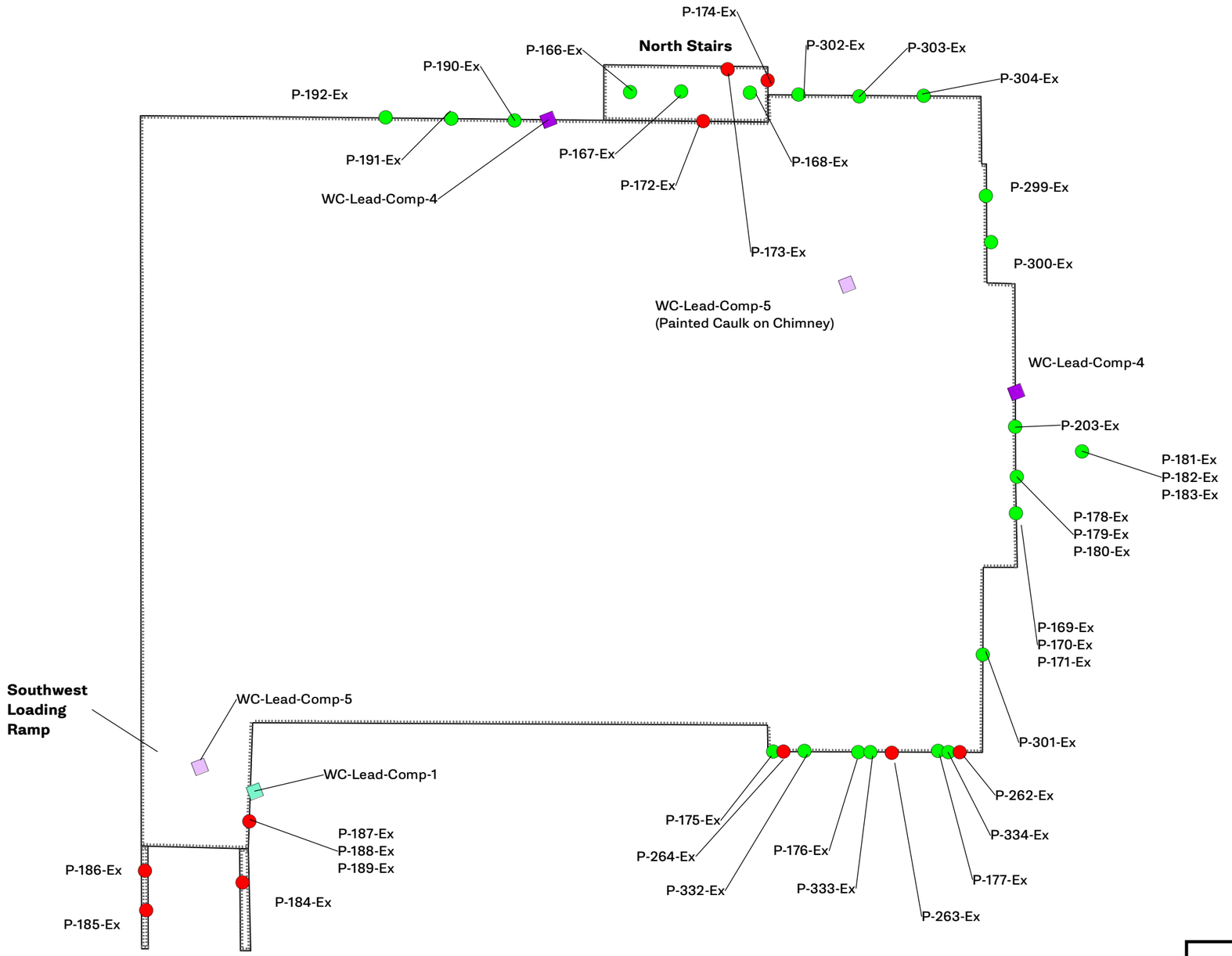
FIGURE 2-1c

PCB PAINTS & COATINGS
AND LEAD COMPOSITE SAMPLES
BASEMENT
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 3 - PCB Paints&Coating and LWC Samples Basement.mxd 1/8/2024 12:59 bfortier

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 4 - PCB Paints&Coating and LWC Samples Roof and Exterior.mxd 1/3/2024 21:05 bfortier



Notes:

1. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

Legend

PCB Paints/Coating Samples

- Total PCBs > 50 ppm
- Total PCBs < 50 ppm

Lead Composite Samples

- WC-Lead-Comp-1
- WC-Lead-Comp-4
- WC-Lead-Comp-5
- Basement Footprint

0 7.5 15 30

Feet

1 inch = 15 feet

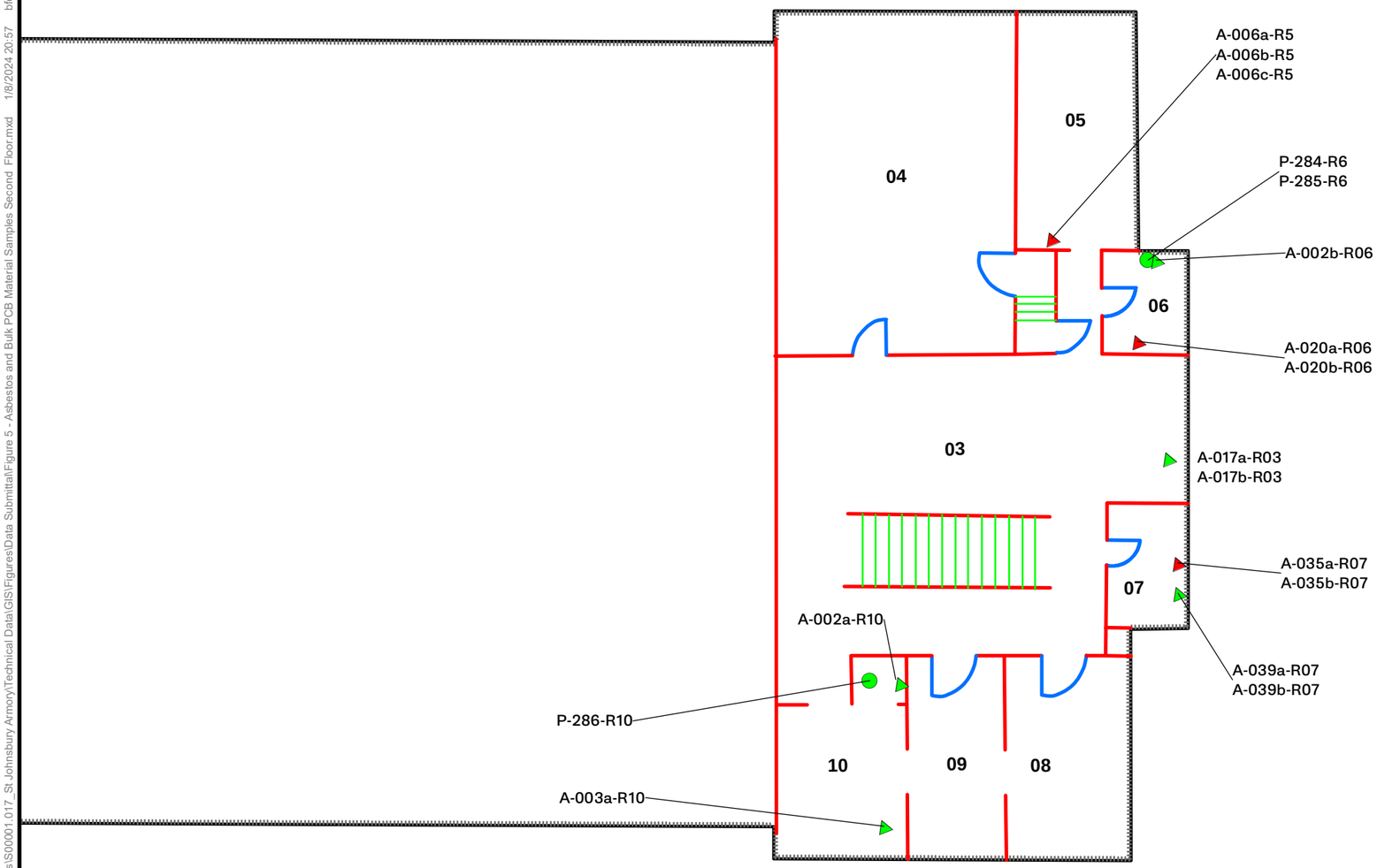
N

KGSNE

FIGURE 2-1d

PCB PAINTS & COATINGS
AND LEAD COMPOSITE SAMPLES
EXTERIOR AND ROOF
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024



Notes:

1.Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

Asbestos Samples

- Non-Asbestos Containing Material
- Asbestos Containing Material

Bulk Material PCB Samples

- Total PCBs < 50 ppm

Building Footprint

Building Layout

- 2nd Floor Door
- 2nd Floor Stairs
- 2nd Floor Wall

0 5 10 20

Feet

1 inch = 10 feet

N

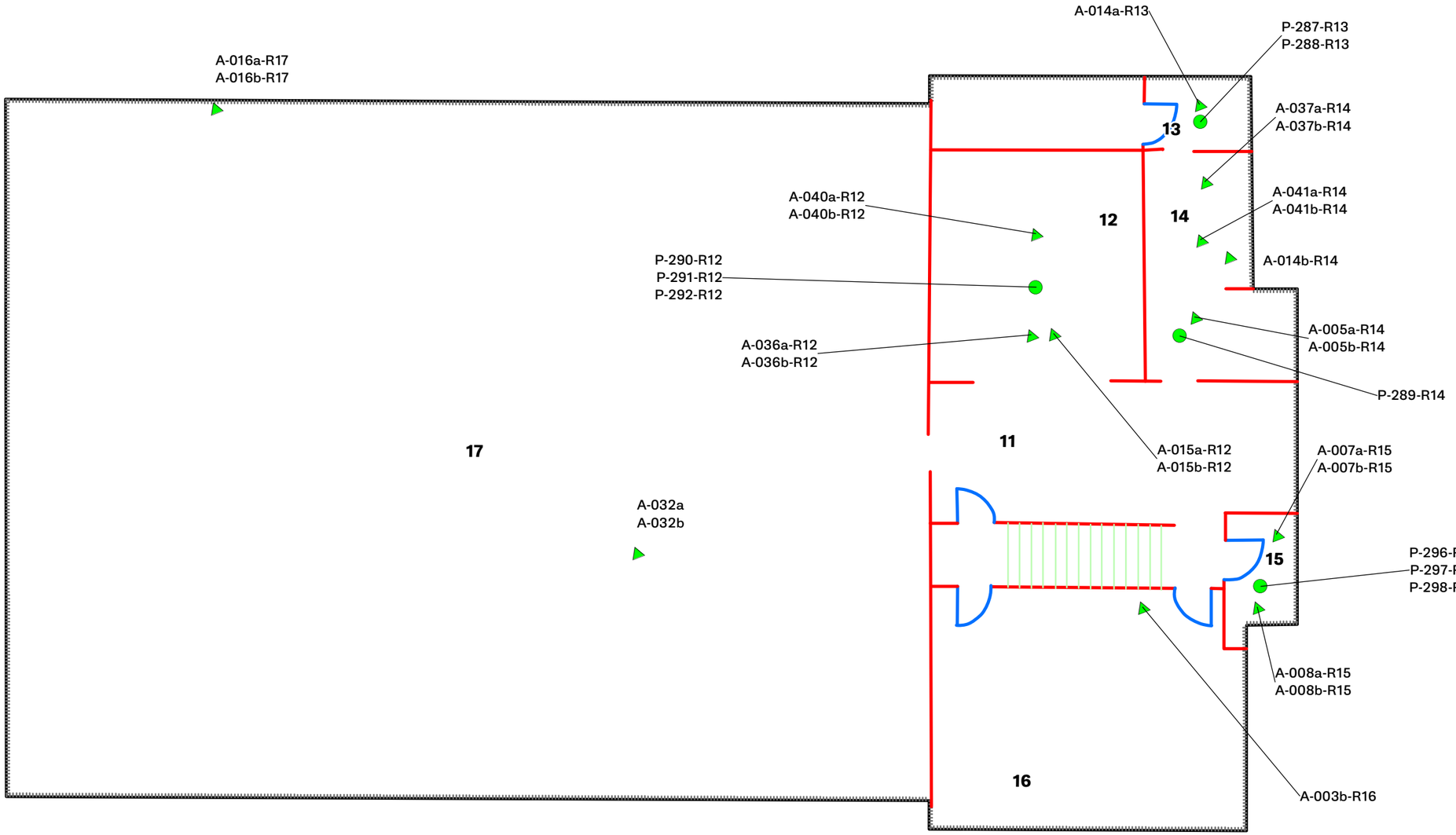
KGSNE

FIGURE 2-2a

ASBESTOS AND PCB BULK MATERIAL SAMPLES SECOND FLOOR ST. JOHNSBURY ARMORY ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 5 - Asbestos and Bulk PCB Material Samples Second Floor.mxd 1/8/2024 20:57 bfortier



Notes:

1.Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

Asbestos Samples

- Non-Asbestos Containing Material

Bulk Material PCB Samples

- Total PCBs < 50 ppm

Building Footprint

Building Layout

- 1st Floor Door
- 1st Floor Stairs
- 1st Floor Wall

0 5 10 20

Feet
1 inch = 10 feet

N

KGSNE

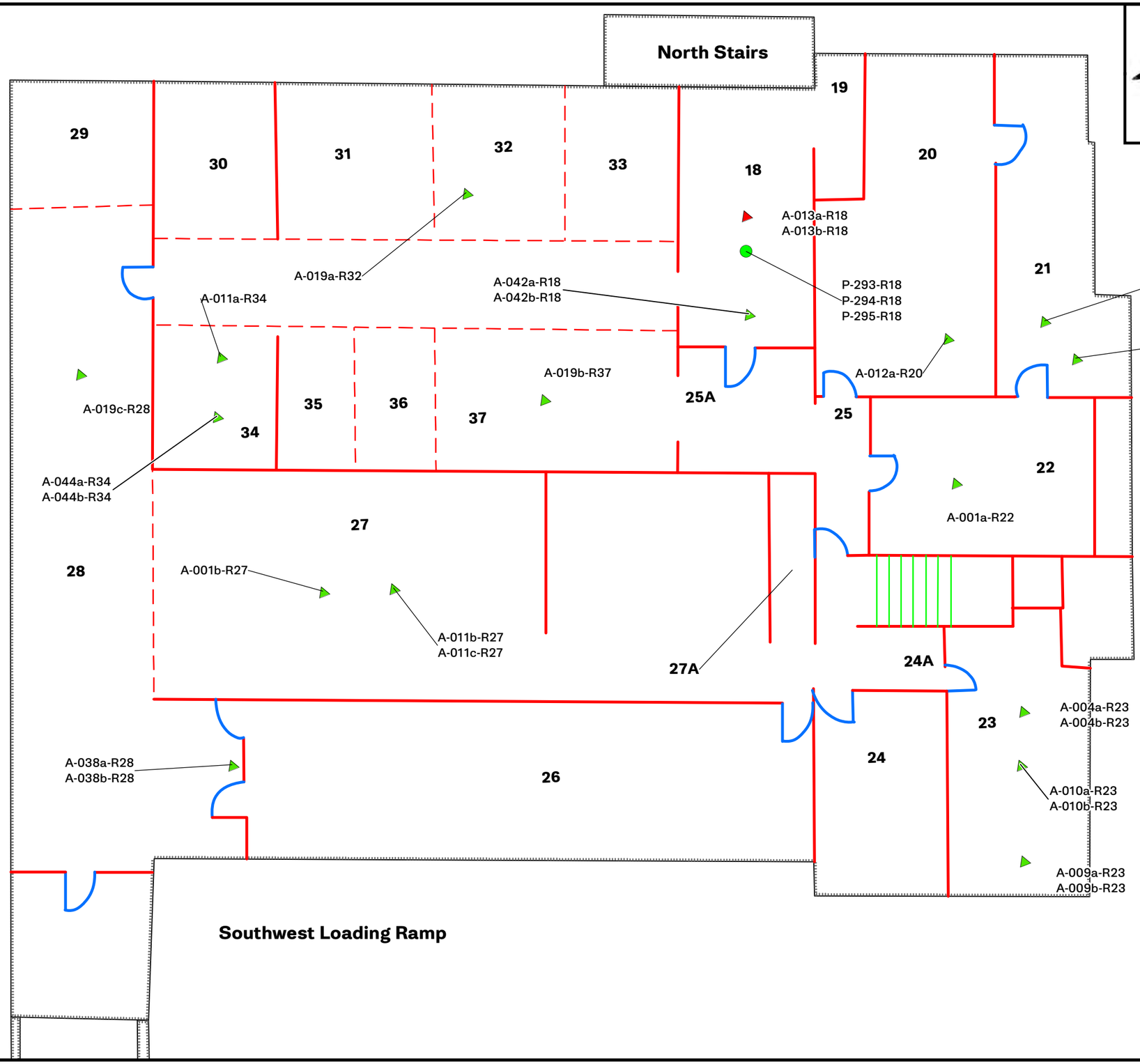
FIGURE 2-2b

ASBESTOS AND PCB BULK MATERIAL SAMPLES
FIRST FLOOR
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 6 - Asbestos and Bulk PCB Material Samples First Floor.mxd 1/3/2024 21:08 bfortier

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 7 - Asbestos and Bulk PCB Material Samples Basement.mxd 1/8/2024 14:15 bfortier



KGSNE

Notes:

1. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

Asbestos Samples

- Non-Asbestos Containing Material
- Asbestos Containing Material

Bulk Material PCB Samples

- Total PCBs < 50 ppm

Building Layout

- Basement Footprint
- Basement Door
- Basement Stairs
- Basement Wall
- Former Basement Wall

0 5 10 20

Feet

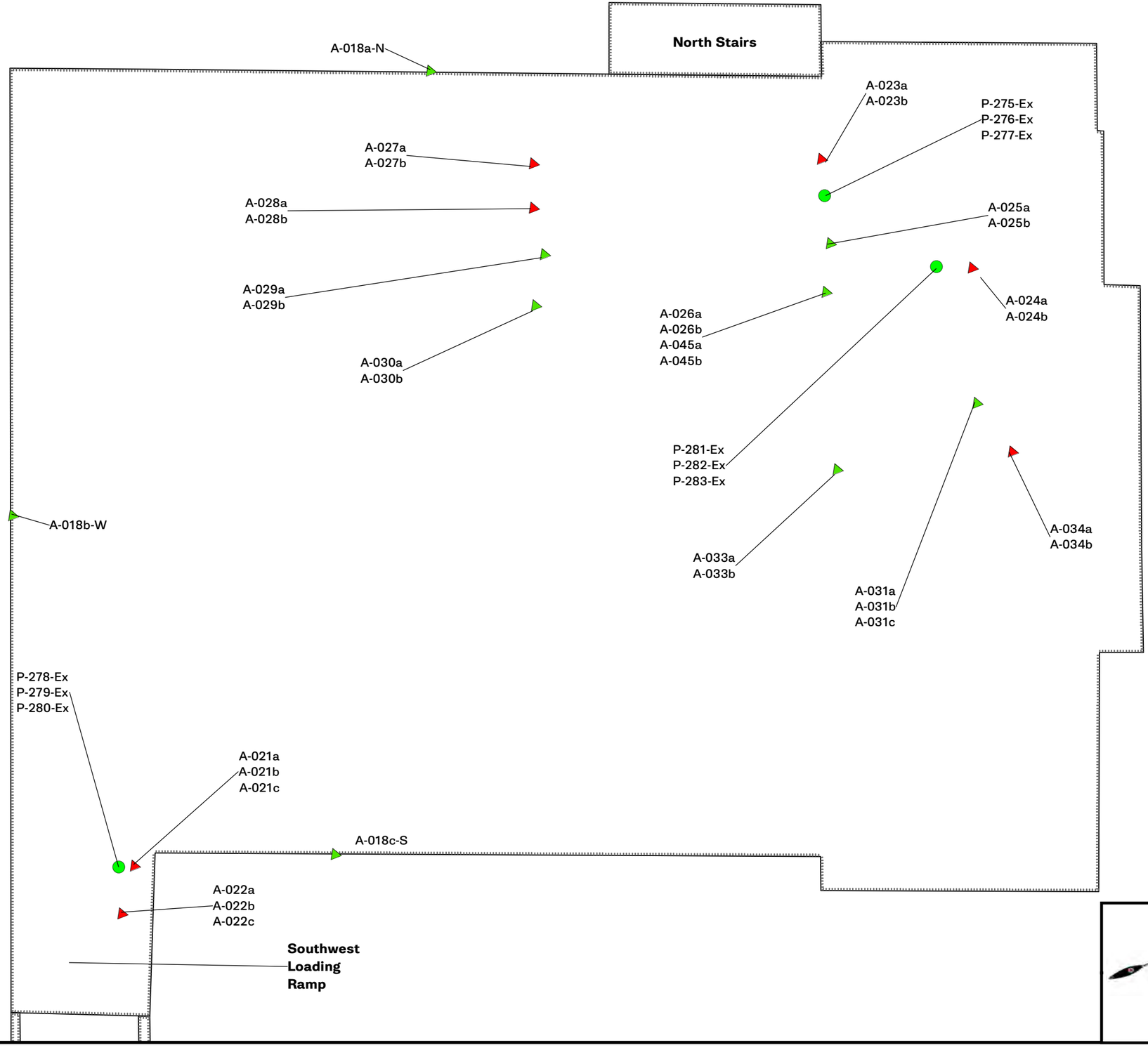
1 inch = 10 feet

N

FIGURE 2-2c

ASBESTOS AND PCB BULK MATERIAL SAMPLES BASEMENT
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024



Notes:

1. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

Legend

Bulk Material PCB Samples

- Total PCBs > 50 ppm
- Total PCBs < 50 ppm

Asbestos Samples

- Non-Asbestos Containing Material
- Asbestos Containing Material
- Building Footprint

0 5 10 20

Feet

1 inch = 10 feet

N

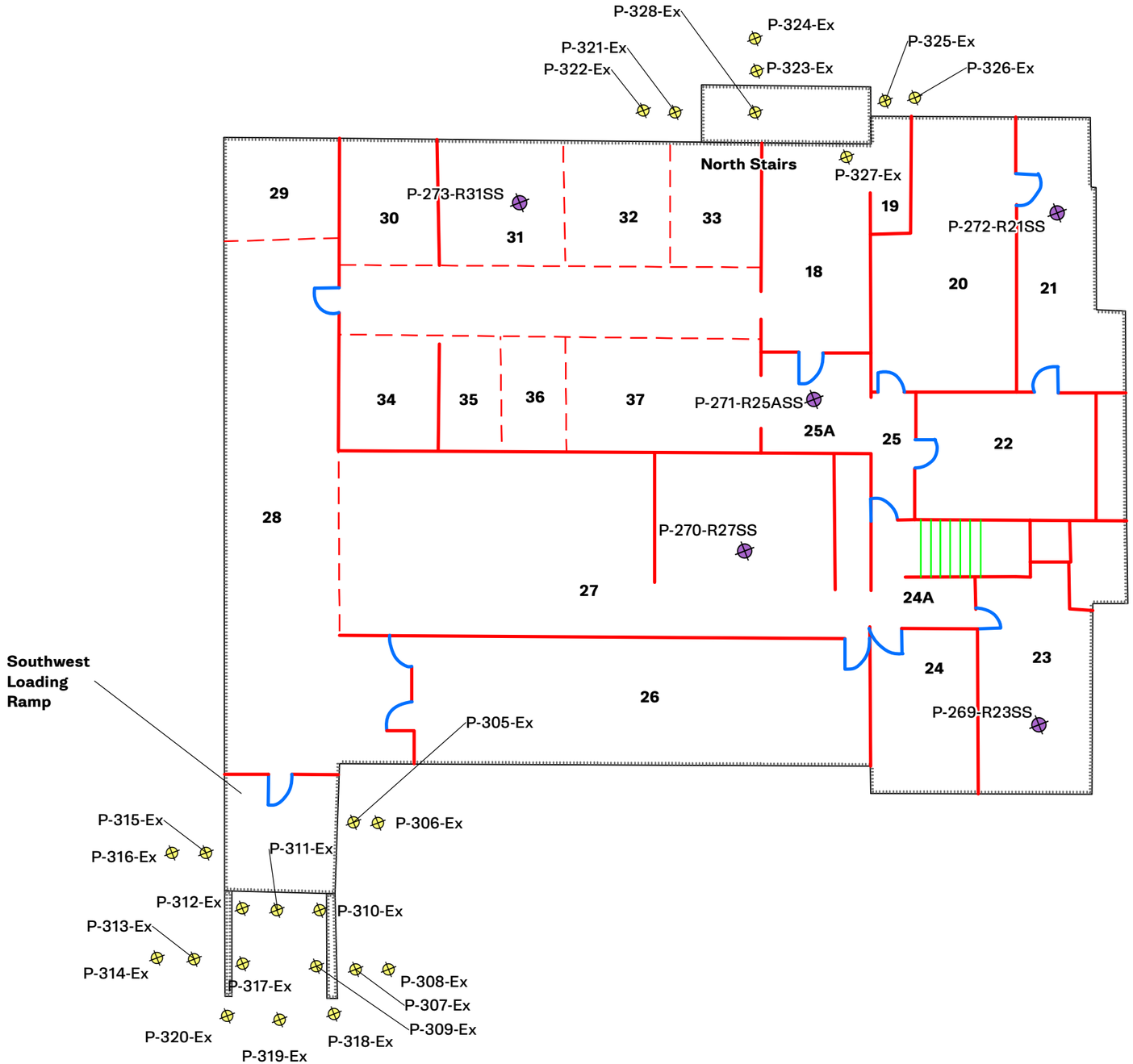
KGSNE

FIGURE 2-2d

ASBESTOS AND PCB BULK MATERIAL SAMPLES
EXTERIOR AND ROOF
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 8 - Asbesols and Bulk PCB Material Samples Roof and Exterior.mxd 1/8/2024 14:26 bfortier



Notes:

1. Locations of site features depicted hereon are approximate and given for illustrative purposes only.

2. Room numbers derived from figures in Atlas Technical Consultants, Workplan for Additional Hazardous Building Materials Sampling, 2023. Numbers are shown in bold.

Legend

- Soil Borings
- Sub-slab locations
- Basement Footprint

Building Layout

- Basement Door
- Basement Stairs
- Basement Wall
- Former Basement Wall

0 7.5 15 30

Feet

1 inch = 15 feet

N

KGSNE

FIGURE 2-3

PCB SOIL SAMPLE LOCATIONS
ST. JOHNSBURY ARMORY
ST. JOHNSBURY, VERMONT

PREPARED BY: BF	CHECKED BY: TA
PROJECT NO. S00001.017	DATE: JANUARY 2024

J:\S00001.000-START 2022 Contract - TO 01 - TBAs\S00001.017_St Johnsbury Armory\Technical Data\GIS\Figures\Data Submittal\Figure 9 - Soil Samples.mxd 1/3/2024 21:12 bfortier

APPENDICES

APPENDIX A

INSPECTION REPORT

For

Asbestos Containing Materials
Polychlorinated Biphenyls (PCB's)

of

St. Johnsbury Armory
1249 Main Street
St. Johnsbury, Vermont

Prepared for:

Mr. Clarence "Tim" Andrews
Nobis Engineering, Inc.
Nobis Group
585 Middlesex Street
Lowell Massachusetts 01851

November 21, 2023

KDAI Project No: -001

KD ASSOCIATES, INC.
Environmental Consulting & Contracting
41 IDX Drive, Suite 209, South Burlington, Vermont 05403-7757 (802) 862-7490

CONTENTS

INTRODUCTION 1

EXCLUSIONS 3

1.0 ASBESTOS CONTAINING BUILDING MATERIALS 4

1.1 SCOPE OF WORK
1.2 FINDINGS
Table 1 • List of Materials Testing Positive for Asbestos
Table 2 • List of Materials Testing Negative for Asbestos
1.3 ASBESTOS CONCLUSIONS

2.0 POLYCHLORINATED BIPHENYLS (PCBS)

2.1 SCOPE OF WORK
2.2 FINDINGS
Table 3 • Results of PCB Sampling
2.3 PCB CONCLUSIONS

3.0 APPENDIX

3.1 PCB Laboratory Analysis Reports
3.2 Asbestos Laboratory Analysis Reports
3.3 Sampling Photo Log
3.4 Consultant Certifications

4.0 DATA EVALUATION MEMORANDA

INTRODUCTION

Nobis Engineering, Inc. (Nobis) retained K-D Associates, Inc. (KDAI) to conduct additional sampling of suspect building materials as described in the Work Plan for Additional Hazardous Materials Sampling, dated February 21. 2023 and revised March 20, 2023, prepared by Atlas Technical Consultants. Additional guidance and sampling protocols were provided by the Quality Assurance Project Plan Addendum for St. Johnsbury Armory dated July 10, 2023.

The scope of work addressed in this report includes the collection of specific bulk samples of suspect asbestos containing building materials to be tested for asbestos and additional suspect building materials and surface coatings to be tested for polychlorinated biphenyls (PCBs), at the former St. Johnsbury Armory, 1249 Main Street, St. Johnsbury, Vermont. This sampling is being conducted as a supplement and follow-up to previous sampling at this building and is not intended to be a comprehensive assessment on its own. Field operations, inspection activities and sample collection have been conducted by qualified and certified environmental professionals in accordance with the standard operating procedures identified in the QAPP prepared by KGSNE JV II, LLC. Field work to collect the bulk samples was conducted on August 14, 15, and 16, 2023 with additional sampling on October 25, 2023.

Sub-slab sampling of soil for PCB's, described in the Scope of Work, was conducted by a separate company, and is not included as part of this report.

Asbestos

Additional suspect building materials to be sampled for asbestos were previously identified and tabulated in Table 3 of the Atlas Work plan to supplement the asbestos assessment work previously completed. Oversight, as well as direction on additional sample collection, was provided by ClayPoint Associates, Inc. while on-site. Exploratory investigation was made behind the brick façade of the building to assess potential hidden suspect asbestos containing materials in two locations on both the East and West sides of the building. No additional suspect materials were observed within the wall structure.

K-D Associates, Inc was assisted in the collection of roof samples by Rodd Roofing, who patched and repaired all roof penetrations and provided access to materials above ground level.

Polychlorinated Biphenyls (PCBs)

PCB source materials sampling (Phase 1) was conducted to supplement previous source sampling completed by a separate firm. The required sampling is described in Section 5 of the report prepared by Atlas Technical Consultants.

Exclusions

K-D Associates, Inc. endeavored to conduct a thorough sampling of the required materials and all additional materials identified in the field that were not previously sampled. Additional limitations may have impacted our ability to inspect all locations such as poor lighting, height constraints, unusual building features and stored materials that block access to suspect materials.

Our sampling addressed building materials not sampled as part of the previous asbestos inspections. This assessment did not attempt to identify all suspect asbestos containing building materials as this was beyond our Scope of Work.

This report includes the results of the laboratory analysis for the samples collected along with a comparison to relevant regulatory limits which can impact future renovation/demolition activities. This report does not intend to provide guidance on meeting any regulatory or reporting requirements potentially initiated by these findings.

1.0 Asbestos Containing Building Materials

1.1 Scope of Work - Multiple samples of each selected homogenous building material were collected using hand tools to remove and place suspect material in a separate and clean sampling bag for transport to the laboratory. Apart from the roofing materials and exterior caulking, sampling locations did not require repair. The number and location of samples, for each suspect material, was prescribed by the Scope of Work and Quality Assurance Plan. Two exploratory removals of the brick façade were made on the Eastern and Western sides of the building. These removals were repaired with an appropriate cement patch material for exterior masonry. 100 bulk samples of suspect asbestos containing building material were collected and submitted to EMSL Analytical, Inc. for analysis via AHERA Method 40CFR 763 Subpart E, Appendix E Supplemented with EPA 600/R-93/116 using Polarized Light Microscopy. For each homogeneous sampling group, the laboratory analyzed samples until a positive result was obtained (i.e. greater than one percent asbestos) or until all samples were analyzed. If one sample indicates an asbestos content greater than one percent, the entire homogenous area must be considered to be an ACM.

1.2 Finding

Table 1. Asbestos Containing (>1%) Building Materials

Sample No./Atlas Designation	Material	Location	Asbestos
A-006A-R5	Gray Adhesive on Brown Paneling	Room 5	Chrysotile 5%
A-013A-R18	Black Mastic	Room 18	Chrysotile 10%
A-020A-R06	Joint Compound	Room 06	Chrysotile 2%
A-035A-R07	Joint Compound	Room 07	Chrysotile 2%
A-021A	Flashing Caulk	Exterior	Chrysotile 2%
A-022A	Silver Paint	Exterior	Chrysotile 3%
A-023A	White Caulk	Exterior	Chrysotile 2%
A-024A	Light Gray Caulk	Exterior	Chrysotile 3%
A-027A	Built-up Tar Paper	Exterior	Chrysotile 10%
A-028A	Asphalt Layer	Exterior	Chrysotile 6%
A-034A	Built-up Roofing	Exterior	Chrysotile 2%

Table 2. Non - Asbestos Containing (≤ 1%) Building Material

Sample No./Atlas Designation	Material	Location	Asbestos
A-016a-R17/#6 A-016b-R17/#6	Yellow caulking around door trim	Room 17, north side of gymnasium	Non ACM
A-025a/#7 A-025b/#7	Asphalt shingle	Eastern end of western portion of building, roof level	Non ACM
A-026a/#8 and #9 A-026b/#8 and #9	Roof paper, brown	Eastern end of western portion of building, roof level	Non ACM
A-045a/#8 and #9 A-045b/#8 and #9	Roof paper, black	Eastern end of western portion of building, roof level	Non ACM
A029a/#10b A029b/#10b	Rubber roofing membrane	Gambrel roof, under slate	Non ACM
A030a/#10c A030b/#10c	Fiberboard	Gambrel roof, under slate	Non ACM
A031a/#12 A031b/#12 A031c/#12	Rubber roof patch adhesive	Flat roof, eastern portion	Non ACM
A-002a-R10/#14 A-002b-R06/#14	Cellotex board	Room 6, 10	Non ACM
A-003a-R10/#15 A-003b-R16/#15	Thin wall panels	Room 6, 16	Non ACM
A-032a/#16 A-032b/#16	Ceiling panels	Room 17, gym	Non ACM
A-017a-R03/#20 A-017b-R03/#20	Drywall	Room 3	Non ACM
A-039a-R07/#20 A-039b-R07/#20	Drywall	Room 7	Non ACM
A-040a-R12/#20 A-040b-R12/#20	Drywall	Room 12	Non ACM
A-041a-R14/#20 A-041b-R14/#20	Drywall	Room 14	Non ACM
A-042a-R18/#20 A-042b-R18/#20	Drywall	Room 18	Non ACM
A-043a-R21/#20 A-043b-R21/#20	Drywall	Room 21	Non ACM
A-044a-R34/#20 A-044b-R34/#20	Drywall	Room 34	Non ACM
A-036a-R12/#21 A-036b-R12/#21	Joint compound	Room 12	Non ACM
A-037a-R14/#21 A-037b-R14/#21	Joint compound	Room 14	Non ACM
A-038a-R26/#21 A-038b-R26/#21	Joint compound	Room 26	Non ACM
A-012a-R20/#23 A-012b-R23/#23	Sprinkler fitting thread sealant	Room 20, 21, 26 (closet)	Non ACM
A-014a-R13/#24 A-014b-R14/#24	Beige mastic	Room 13, 14, 0n wood floor	Non ACM

Sample No./Atlas Designation	Material	Location	Asbestos
A-005a-R14/#25 A-005b-R14/#25	White, sub floor plaster like filler	Room 14, under wood floor	Non ACM
A-015a-R12/#26 A-015b-R12/#26	Carpet mastic, remnant fibers on wood floor	Room 12	Non ACM
A-001a-R22/#27 A-001b-R22/#27	Yellow mastic on concrete	Room 22, 27, 30-37	Non ACM
A-011a-R34/#29 A-011b-R27/#29 A-011c-R27/#29	Leveling compound	Room 27, 34	Non ACM
A-011a-R23/#30 A-011b-R23/#30	Ceramic tile thin set on floor	Room 23	Non ACM
A-004a-R23/#31 A-004b-R23/#31	Ceramic tile grout on floor	Room 23	Non ACM
A-009a-R23/#32 A-009b-R23/#32	Ceramic tile on floor	Room 23	Non ACM
A-007a-R15/#33 A-007b-R15/#33	Gray battleship linoleum	Room15	Non ACM
A-008a-R15/#33 A-008b-R15/#33	Brown mastic associated with gray battleship linoleum	Room15	Non ACM
A-018a-N/#35 A-018b-W/#35 A-018c-S/#35	Brick mortar	Exterior on all sides	Non ACM
A-019a-R23/#36 A-019b-R23/#37 A-019c-R23/#28	Concrete slab	Basement	Non ACM
A-033a/#38 A-033b/#38	Grey caulking	East window of sloped roof	Non ACM

1.3 Asbestos Conclusions - As part of this assessment, asbestos was found to be present at a concentration greater than 1%, in 10 of the building materials sampled. In general, these materials include adhesive paneling, mastic on floors, joint compound on walls and ceilings exterior caulking, and exterior roofing materials at various locations. The Environmental Protection Agency (EPA), Vermont Occupational Safety and Health Administration (VOSHA), and the Vermont Department of Health (VDOH) have established rules and regulations affecting any operations that may affect asbestos containing materials including renovation or demolition activities.

2.0 POLYCHLORINATED BIPHENYLS (PCBs)

2.1 Scope of Work - For each homogenous paint/coating and sealant material identified for PCB sampling, a minimum of 10 grams of material were collected. The collection surface was first cleaned with a wetted paper towel to remove dust or surface grime. Samples were collected of the full thickness of wall paint (all layers). Sample locations were identified with a unique sampling number and a photograph taken to further document the location. Exterior caulking sample locations were repaired with appropriate grey caulking sealant.

Sampling tools were decontaminated between samples by first removing gross contamination, and then performing a final wipe using a clean hexane wetted paper towel. Samples were placed in a 4 oz amber colored glass jar for transport to the laboratory. Custody of samples was transferred directly to Nobis Group for transport to a laboratory under a

chain-of-custody. Samples were submitted for analysis to Con-Test via EPA 3540C Soxhlet Extraction method and SW-846 8082 Arcolor analytical method.

Quality control samples collected included field duplicates and matrix spike duplicates were collected and submitted in accordance with the 1 per 20 duplicate frequencies.

2.2 Findings

Exterior/ Interior	Floor	Room	Direction/ component	Substrate	Color	ID	Total PCB's
Interior	2nd	3		Wood Trim	Salmon	P-005-R03WT	58
		4			Drk. Beige	P-010-R04WT	51
		4		Door	Drk. Beige	P-011-R04D	50
		5		Door	Robin's Egg Blue	P-024-R05D	72
		6	Floor	Hardwood	Brown	P-023-R06F	52
		8	Floor	Hardwood	Brown	P-034-R08F	51
		9	East	Plaster/ Lath	Blue/White	P-038-R09E	50
		9	Floor	Hardwood	Brown	P-042-R09F	56
Interior	1st	Stairwell 1-2	South	Plaster/ Lath	White/Salmon	P-257-S12S	55
		Stairwell 1-2	North	Plaster/ Lath	White	P-223-S12N	64
		Stairwell 1-2	Wood Rails		Beige	P-274-S12R	50
		Stairwell 1-2	Floor	Wood Steps	Lt. Green/Orange/ Blue	P-155-S12F	65
		11	Door		White/Beige/Blue	P-250-R11D	50
		15	East	Plaster/ Lath	Pink/Green/White, Brown	P-259-R15E	56
		15	South	Plaster/ Lath	Pink/Green/White/ Brown	P-236-R15S	59
		15	Wood Trim		Lt. Brown/Blue/ White	P-221-R15WT	63
Interior	Basement	Stairwell 0-1	Wood Rails		Drk. Green	P-065-S01R	81
Interior	Basement	Stairwell 0-1	Door		White/ Drk. Green	P-067-S01D	65
Interior	Basement	Stairwell 0-1	Floor	Wood Steps	White/Drk. Green/ Black/Brown/ Lt. Blue	P-239-S01F	110
Interior	Basement	18	East	Brick	Lt. Blue/Salmon/ Brown	P-048-R18E	180

Interior	Basement	18	South	Brick	Lt. Blue/ White	P-049-R18S	330
Interior	Basement	18	North	Concrete	White/Green/Drk. Grey	P-051-R18NC	290
Interior	Basement	18		Brick	White/Beige	P-050-R18NB	110
Interior	Basement	20	East	Brick	White/Dark Grey	P-053-R20E	4000
Interior	Basement	20	West	Brick	Lt. Green	P-054-R20W	5100
Interior	Basement	20	North	Concrete	Beige/Drk. Grey	P-056-R20NC	6400
Interior	Basement	20		Brick	Lt. Green	P-055-R20NB	1300
Interior	Basement	21	East	Concrete	Lt. Blue/ Brown	P-057-R21EC	86
Interior	Basement	21		Brick	Pink/Lt. Green/ Brown	P-058-R21EB	52
Interior	Basement	21	South	Brick	White/Lt. Blue	P-059-R21S	380
Interior	Basement	21	West	Brick	Blue/Lt. Green	P-094-R21W	51
Interior	Basement	21	Ceiling	Drywall over ??	White	P-060-R21C	50
Interior	Basement	21	Door		Lt. Blue/White/ Green/Orange/ Yellow	P-061-R21D	52
Interior	Basement	22	East	Painted Drywall	Yellow/White	P-068-R22EDW	52
Interior	Basement	22	East	Concrete Foundation	Brown	P-069-R22EC	460
Interior	Basement	22	South	Brick	Lt. Blue	P-081-R22SB	400
Interior	Basement	22	West	Brick	Lt. Blue	P-071-R22WB	280
Interior	Basement	22	Ceiling	2x4 wood	White	P-073-R22C	67
Interior	Basement	22	Door		White	P-072-R2D	200
Interior	Basement	23	East	Concrete	Salmon/Drk. Green	P-074-R23EC	150
Interior	Basement	23		Brick	Salmon/Lt. Green/ White	P-075-R23EB	65
Interior	Basement	23	West	Brick	Salmon/Lt. Green	P-077-R23W	120
Interior	Basement	23	North	Brick	Salmon	P-078-R23N	150
Interior	Basement	23	Ceiling	Pressed tin over lath	White	P-224-R23C	950
Interior	Basement	23	Wood Trim		Drk. Green/White	P-076-R23EWT	92
Interior	Basement	23	Door		White/Drk. Blue	P-079-R23D	75

Interior	Basement	24	East	Brick	Salmon/White/ Lt. Green	P-082-R24E	120
Interior	Basement	24	South	Concrete	Beige/ Lt. Green	P-083-R24SC	130
Interior	Basement	24		Brick	Beige/ Lt. Green	P-084-R24SB	130
Interior	Basement	24	West	Brick	White/Lt. Green	P-085-R24W	110
Interior	Basement	24	Door		White/Beige	P-256-R24D	60
Interior	Basement	24A	West	Brick	White/Lt. Green	P-098-R24AW	200
Interior	Basement	24A	North	Brick	Beige/ Lt. Green	P-099-R24AN	150
Interior	Basement	24A	Ceiling	Drywall over ??		P-100-R24AC	110
Interior	Basement	25	East	Brick	White/ Lt. Green/ Maroon	P-086-R25E	300
Interior	Basement	25	South	Brick		P-087-R25S	90
Interior	Basement	25	Ceiling	Drywall	Beige	P-088-R2SCDW	66
Interior	Basement	25	Ceiling	Plaster/ Lath	Beige	P-089-R2SCP	56
Interior	Basement	25A	East	Brick	Lt. Green	P-090-R25AE	350
Interior	Basement	25A	South	Brick	Lt. Green	P-091-R25AS	380
Interior	Basement	26	South	Concrete	White	P-102-R26SC	80
Interior	Basement	27	North	Brick	White	P-108-R27NB	50
Interior	Basement	29	West	Concrete		P-116-29WC	60
Interior	Basement	29	North	Concrete		P-119-29NC	77
Interior	Basement	29		Brick	Lt. Green/Yellow	P-118-29NB	72
Interior	Basement	30	East	Brick	Lt. Green/White	P-120-R30E	170
Interior	Basement	30	North	Concrete	Lt. Green/White	P-121-R30NC	130
Interior	Basement	30		Brick	Lt. Green/White	P-122-R30NB	94
Interior	Basement	31	North	Concrete	White	P-125-R31NC	160
Interior	Basement	31		Brick	White	P-132-R31NB	250
Interior	Basement	33	East	Brick	Lt. Green	P-126-R33E	300
Interior	Basement	33	North	Concrete	Lt. Green/White	P-127-R33NC	310
Interior	Basement	33		Brick	Lt. Green	P-237-R33NB	320
Interior	Basement	34	East	Brick	Lt. Green	P-260-R34E	200

Interior	Basement	35	South	Brick	White/Lt. Green	P-245-R35S	220
Interior	Basement	35	West	Brick	White/Lt. Green	P-129-R35W	180
Interior	Basement	35	Ceiling	Pressed tin over lath	White/ Brown	P-238-R35C	130
Interior	Basement	36	Ceiling	Pressed tin over lath		P-246-R36C	130
Interior	Basement	37	East	Brick	Lt. Green	P-130-R37E	400
Interior	Basement	37	South	Brick	Lt. Green	P-131-R37S	270
Interior	Basement	37	Ceiling	Pressed tin over lath	White/Brown	P-241-R37C	210
Interior	Basement	North basement stairwell		Concrete	Multi-color painted	P-172-Ex	210
						P-173-Ex	210
						P-174-Ex	210
Interior	Basement	Window Sashes		Wood	Dark Green painted	P-262-Ex	210
						P-263-Ex	210
						P-264-Ex	210
Interior	Basement	Southwest Loading Ramp		Concrete	Gray painted	P-184-Ex	210
						P-185-Ex	210
						P-186-Ex	210
Interior	Basement	Southwest Loading Ramp		Wood Trim/ Soffit/Door & Sheet Metal walls	White painted	P-188-Ex	210
Interior	Basement	Southwest Loading Ramp		Wood Trim/ Soffit/Door & Sheet Metal walls	White painted	P-189-Ex	210
Interior	Basement	Stairwell 0-1	Wood Rails		Drk. Green	P-FD-03	210
Interior	Basement	33	North	Concrete	Lt. Green/White	P-FD-05	210
Exterior	N/A	Window Sashes		Wood	Dark Green painted	P-FD-09	210
Interior	Basement	37	South	Brick	Lt. Green	P-FD-011	210

2.3 PCB Conclusions - PCB's in a concentration greater than 50 ppm were found to be present in a significant number of the bulk samples collected. EPA regulations implementing the Toxic Substances Control Act (TSCA) prohibit the use of PCBs in caulk and other building materials manufactured with PCBs at levels greater than or equal to 50 ppm, including the continued use of such materials that are already in place.

APPENDIX B

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 5, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3248

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3248-01 6

23H3248-02 7

23H3248-03 8

23H3248-04 9

23H3248-05 10

23H3248-06 11

23H3248-07 12

23H3248-08 13

23H3248-09 14

23H3248-10 15

23H3248-11 16

23H3248-12 17

23H3248-13 18

23H3248-14 19

23H3248-15 20

23H3248-16 21

23H3248-17 22

23H3248-18 23

23H3248-19 24

23H3248-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B350677 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/5/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3248

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-001-R03E	23H3248-01	Paint		SW-846 8082A	
P-002-R03S	23H3248-02	Paint		SW-846 8082A	
P-003-R03W	23H3248-03	Paint		SW-846 8082A	
P-004-R03C	23H3248-04	Paint		SW-846 8082A	
P-005-R03WT	23H3248-05	Paint		SW-846 8082A	
P-006-R03D	23H3248-06	Paint		SW-846 8082A	
P-007-R04E	23H3248-07	Paint		SW-846 8082A	
P-008-R04S	23H3248-08	Paint		SW-846 8082A	
P-009-R04W	23H3248-09	Paint		SW-846 8082A	
P-010-R04WT	23H3248-10	Paint		SW-846 8082A	
P-011-R04D	23H3248-11	Paint		SW-846 8082A	
P-012-RO5E	23H3248-12	Paint		SW-846 8082A	
P-013-R05S	23H3248-13	Paint		SW-846 8082A	
P-014-R05W	23H3248-14	Paint		SW-846 8082A	
P-015-R05C	23H3248-15	Paint		SW-846 8082A	
P-016-R05F	23H3248-16	Paint		SW-846 8082A	
P-017-R05WT	23H3248-17	Paint		SW-846 8082A	
P-018-R06E	23H3248-18	Paint		SW-846 8082A	
P-019-R06S	23H3248-19	Paint		SW-846 8082A	
P-020-R06C	23H3248-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B350677-MS1, B350677-MSD1

Aroclor-1016 [2C]
B350677-MS1, B350677-MSD1

Aroclor-1260
B350677-MS1, B350677-MSD1

Aroclor-1260 [2C]
B350677-MS1, B350677-MSD1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-001-R03E | Sampled: 8/14/2023 09:20

Sample ID: 23H3248-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1254 [2]	37	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.5	30-150		9/4/23 7:34
Decachlorobiphenyl [2]	95.6	30-150		9/4/23 7:34
Tetrachloro-m-xylene [1]	94.2	30-150		9/4/23 7:34
Tetrachloro-m-xylene [2]	91.8	30-150		9/4/23 7:34

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-002-R03S | Sampled: 8/14/2023 09:21

Sample ID: 23H3248-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1254 [2]	46	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 7:51	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.2	30-150		9/4/23 7:51
Decachlorobiphenyl [2]	85.3	30-150		9/4/23 7:51
Tetrachloro-m-xylene [1]	82.6	30-150		9/4/23 7:51
Tetrachloro-m-xylene [2]	81.7	30-150		9/4/23 7:51

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-003-R03W | Sampled: 8/14/2023 09:22

Sample ID: 23H3248-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1254 [2]	43	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:09	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	88.3	30-150		9/4/23	8:09
Decachlorobiphenyl [2]	88.8	30-150		9/4/23	8:09
Tetrachloro-m-xylene [1]	81.8	30-150		9/4/23	8:09
Tetrachloro-m-xylene [2]	85.3	30-150		9/4/23	8:09

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-004-R03C | Sampled: 8/14/2023 09:23

Sample ID: 23H3248-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1221 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1232 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1242 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1248 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1254 [1]	29	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1260 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1262 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG
Aroclor-1268 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:26	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	92.8	30-150		9/4/23	8:26
Decachlorobiphenyl [2]	92.4	30-150		9/4/23	8:26
Tetrachloro-m-xylene [1]	76.1	30-150		9/4/23	8:26
Tetrachloro-m-xylene [2]	87.8	30-150		9/4/23	8:26

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-005-R03WT | Sampled: 8/14/2023 09:24

Sample ID: 23H3248-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1254 [1]	58	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 8:43	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	88.8	30-150		9/4/23	8:43
Decachlorobiphenyl [2]	89.0	30-150		9/4/23	8:43
Tetrachloro-m-xylene [1]	85.8	30-150		9/4/23	8:43
Tetrachloro-m-xylene [2]	84.8	30-150		9/4/23	8:43

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-006-R03D | Sampled: 8/14/2023 09:25

Sample ID: 23H3248-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1221 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1232 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1242 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1248 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1254 [2]	41	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1260 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1262 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG
Aroclor-1268 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:00	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	65.8	30-150		9/4/23 9:00
Decachlorobiphenyl [2]	66.0	30-150		9/4/23 9:00
Tetrachloro-m-xylene [1]	53.0	30-150		9/4/23 9:00
Tetrachloro-m-xylene [2]	61.5	30-150		9/4/23 9:00

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-007-R04E | Sampled: 8/14/2023 09:30

Sample ID: 23H3248-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1254 [1]	23	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:17	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.4	30-150		9/4/23 9:17
Decachlorobiphenyl [2]	92.6	30-150		9/4/23 9:17
Tetrachloro-m-xylene [1]	90.8	30-150		9/4/23 9:17
Tetrachloro-m-xylene [2]	89.6	30-150		9/4/23 9:17

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-008-R04S | Sampled: 8/14/2023 09:31

Sample ID: 23H3248-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1221 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1232 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1242 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1248 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1254 [1]	17	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1260 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1262 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG
Aroclor-1268 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.7	30-150		9/4/23 9:34
Decachlorobiphenyl [2]	89.4	30-150		9/4/23 9:34
Tetrachloro-m-xylene [1]	86.8	30-150		9/4/23 9:34
Tetrachloro-m-xylene [2]	85.6	30-150		9/4/23 9:34

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-009-R04W | Sampled: 8/14/2023 09:32

Sample ID: 23H3248-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1254 [1]	24	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 9:51	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.5	30-150		9/4/23 9:51
Decachlorobiphenyl [2]	94.2	30-150		9/4/23 9:51
Tetrachloro-m-xylene [1]	94.3	30-150		9/4/23 9:51
Tetrachloro-m-xylene [2]	91.9	30-150		9/4/23 9:51

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-010-R04WT | Sampled: 8/14/2023 09:33

Sample ID: 23H3248-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1254 [1]	51	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 10:09	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.8	30-150		9/4/23 10:09
Decachlorobiphenyl [2]	81.5	30-150		9/4/23 10:09
Tetrachloro-m-xylene [1]	80.4	30-150		9/4/23 10:09
Tetrachloro-m-xylene [2]	81.5	30-150		9/4/23 10:09

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-011-R04D | Sampled: 8/14/2023 09:34

Sample ID: 23H3248-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1254 [1]	50	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:29	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.7	30-150		9/4/23 11:29
Decachlorobiphenyl [2]	72.4	30-150		9/4/23 11:29
Tetrachloro-m-xylene [1]	70.5	30-150		9/4/23 11:29
Tetrachloro-m-xylene [2]	70.5	30-150		9/4/23 11:29

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-012-RO5E | Sampled: 8/14/2023 09:50

Sample ID: 23H3248-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1254 [2]	18	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 11:47	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.2	30-150		9/4/23 11:47
Decachlorobiphenyl [2]	89.5	30-150		9/4/23 11:47
Tetrachloro-m-xylene [1]	62.2	30-150		9/4/23 11:47
Tetrachloro-m-xylene [2]	87.0	30-150		9/4/23 11:47

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-013-R05S | Sampled: 8/14/2023 09:51

Sample ID: 23H3248-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1254 [2]	31	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:04	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.6	30-150		9/4/23 12:04
Decachlorobiphenyl [2]	95.7	30-150		9/4/23 12:04
Tetrachloro-m-xylene [1]	90.2	30-150		9/4/23 12:04
Tetrachloro-m-xylene [2]	89.2	30-150		9/4/23 12:04

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-014-R05W | Sampled: 8/14/2023 09:52

Sample ID: 23H3248-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1221 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1232 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1242 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1248 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1254 [1]	22	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1260 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1262 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG
Aroclor-1268 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:21	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.5	30-150		9/4/23 12:21
Decachlorobiphenyl [2]	99.2	30-150		9/4/23 12:21
Tetrachloro-m-xylene [1]	92.6	30-150		9/4/23 12:21
Tetrachloro-m-xylene [2]	92.0	30-150		9/4/23 12:21

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-015-R05C | Sampled: 8/14/2023 09:53

Sample ID: 23H3248-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1254 [2]	16	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:38	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.5	30-150		9/4/23 12:38
Decachlorobiphenyl [2]	76.6	30-150		9/4/23 12:38
Tetrachloro-m-xylene [1]	75.9	30-150		9/4/23 12:38
Tetrachloro-m-xylene [2]	75.7	30-150		9/4/23 12:38

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-016-R05F | Sampled: 8/14/2023 09:54

Sample ID: 23H3248-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1254 [2]	21	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 12:55	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.8	30-150		9/4/23 12:55
Decachlorobiphenyl [2]	89.4	30-150		9/4/23 12:55
Tetrachloro-m-xylene [1]	86.3	30-150		9/4/23 12:55
Tetrachloro-m-xylene [2]	86.8	30-150		9/4/23 12:55

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-017-R05WT | Sampled: 8/14/2023 09:55

Sample ID: 23H3248-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1221 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1232 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1242 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1248 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1254 [1]	35	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1260 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1262 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG
Aroclor-1268 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:12	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.1	30-150		9/4/23 13:12
Decachlorobiphenyl [2]	87.8	30-150		9/4/23 13:12
Tetrachloro-m-xylene [1]	84.2	30-150		9/4/23 13:12
Tetrachloro-m-xylene [2]	84.2	30-150		9/4/23 13:12

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-018-R06E | Sampled: 8/14/2023 10:15

Sample ID: 23H3248-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1254 [2]	23	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:30	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.9	30-150		9/4/23 13:30
Decachlorobiphenyl [2]	91.6	30-150		9/4/23 13:30
Tetrachloro-m-xylene [1]	89.6	30-150		9/4/23 13:30
Tetrachloro-m-xylene [2]	88.2	30-150		9/4/23 13:30

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-019-R06S | Sampled: 8/14/2023 10:16

Sample ID: 23H3248-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1221 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1232 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1242 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1248 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1254 [1]	21	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1260 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1262 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG
Aroclor-1268 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 13:47	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.5	30-150		9/4/23 13:47
Decachlorobiphenyl [2]	89.0	30-150		9/4/23 13:47
Tetrachloro-m-xylene [1]	83.3	30-150		9/4/23 13:47
Tetrachloro-m-xylene [2]	83.2	30-150		9/4/23 13:47

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3248

Date Received: 8/22/2023

Field Sample #: P-020-R06C | Sampled: 8/14/2023 10:17

Sample ID: 23H3248-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1254 [1]	18	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 14:04	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.1	30-150		9/4/23 14:04
Decachlorobiphenyl [2]	89.6	30-150		9/4/23 14:04
Tetrachloro-m-xylene [1]	83.9	30-150		9/4/23 14:04
Tetrachloro-m-xylene [2]	83.2	30-150		9/4/23 14:04

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3248-01 [P-001-R03E]	B350677	0.259	10.0	08/31/23
23H3248-02 [P-002-R03S]	B350677	0.209	10.0	08/31/23
23H3248-03 [P-003-R03W]	B350677	0.240	10.0	08/31/23
23H3248-04 [P-004-R03C]	B350677	0.261	10.0	08/31/23
23H3248-05 [P-005-R03WT]	B350677	0.209	10.0	08/31/23
23H3248-06 [P-006-R03D]	B350677	0.202	10.0	08/31/23
23H3248-07 [P-007-R04E]	B350677	0.206	10.0	08/31/23
23H3248-08 [P-008-R04S]	B350677	0.230	10.0	08/31/23
23H3248-09 [P-009-R04W]	B350677	0.228	10.0	08/31/23
23H3248-10 [P-010-R04WT]	B350677	0.214	10.0	08/31/23
23H3248-11 [P-011-R04D]	B350677	0.214	10.0	08/31/23
23H3248-12 [P-012-RO5E]	B350677	0.213	10.0	08/31/23
23H3248-13 [P-013-R05S]	B350677	0.213	10.0	08/31/23
23H3248-14 [P-014-R05W]	B350677	0.202	10.0	08/31/23
23H3248-15 [P-015-R05C]	B350677	0.235	10.0	08/31/23
23H3248-16 [P-016-R05F]	B350677	0.213	10.0	08/31/23
23H3248-17 [P-017-R05WT]	B350677	0.220	10.0	08/31/23
23H3248-18 [P-018-R06E]	B350677	0.212	10.0	08/31/23
23H3248-19 [P-019-R06S]	B350677	0.218	10.0	08/31/23
23H3248-20 [P-020-R06C]	B350677	0.204	10.0	08/31/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350677 - SW-846 3540C										
Blank (B350677-BLK1)				Prepared: 08/31/23 Analyzed: 09/04/23						
Aroclor-1016	ND	0.42	mg/Kg							
Aroclor-1016 [2C]	ND	0.42	mg/Kg							
Aroclor-1221	ND	0.42	mg/Kg							
Aroclor-1221 [2C]	ND	0.42	mg/Kg							
Aroclor-1232	ND	0.42	mg/Kg							
Aroclor-1232 [2C]	ND	0.42	mg/Kg							
Aroclor-1242	ND	0.42	mg/Kg							
Aroclor-1242 [2C]	ND	0.42	mg/Kg							
Aroclor-1248	ND	0.42	mg/Kg							
Aroclor-1248 [2C]	ND	0.42	mg/Kg							
Aroclor-1254	ND	0.42	mg/Kg							
Aroclor-1254 [2C]	ND	0.42	mg/Kg							
Aroclor-1260	ND	0.42	mg/Kg							
Aroclor-1260 [2C]	ND	0.42	mg/Kg							
Aroclor-1262	ND	0.42	mg/Kg							
Aroclor-1262 [2C]	ND	0.42	mg/Kg							
Aroclor-1268	ND	0.42	mg/Kg							
Aroclor-1268 [2C]	ND	0.42	mg/Kg							
Surrogate: Decachlorobiphenyl	*7.35*		mg/Kg	8.42		87.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.67*		mg/Kg	8.42		91.1	30-150			
Surrogate: Tetrachloro-m-xylene	*7.23*		mg/Kg	8.42		85.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.51*		mg/Kg	8.42		89.1	30-150			
LCS (B350677-BS1)				Prepared: 08/31/23 Analyzed: 09/04/23						
Aroclor-1016	1.9	0.46	mg/Kg	2.32		81.7	40-140			
Aroclor-1016 [2C]	2.0	0.46	mg/Kg	2.32		87.5	40-140			
Aroclor-1260	1.7	0.46	mg/Kg	2.32		74.4	40-140			
Aroclor-1260 [2C]	1.8	0.46	mg/Kg	2.32		78.5	40-140			
Surrogate: Decachlorobiphenyl	*7.76*		mg/Kg	9.29		83.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.25*		mg/Kg	9.29		88.9	30-150			
Surrogate: Tetrachloro-m-xylene	*7.46*		mg/Kg	9.29		80.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.96*		mg/Kg	9.29		85.6	30-150			
LCS Dup (B350677-BSD1)				Prepared: 08/31/23 Analyzed: 09/04/23						
Aroclor-1016	1.6	0.43	mg/Kg	2.15		74.8	40-140	16.4	30	
Aroclor-1016 [2C]	1.9	0.43	mg/Kg	2.15		87.0	40-140	8.21	30	
Aroclor-1260	1.6	0.43	mg/Kg	2.15		76.1	40-140	5.33	30	
Aroclor-1260 [2C]	1.8	0.43	mg/Kg	2.15		83.2	40-140	1.72	30	
Surrogate: Decachlorobiphenyl	*7.42*		mg/Kg	8.61		86.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.92*		mg/Kg	8.61		92.0	30-150			
Surrogate: Tetrachloro-m-xylene	*7.44*		mg/Kg	8.61		86.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.81*		mg/Kg	8.61		90.7	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B350677 - SW-846 3540C											
Matrix Spike (B350677-MS1)	**Source: 23H3248-19**			Prepared: 08/31/23 Analyzed: 09/04/23							
Aroclor-1016	7.7	4.8	mg/Kg	2.41	ND	**319**	*	40-140			MS-21
Aroclor-1016 [2C]	12	4.8	mg/Kg	2.41	ND	**510**	*	40-140			MS-21
Aroclor-1260	5.5	4.8	mg/Kg	2.41	ND	**228**	*	40-140			MS-21
Aroclor-1260 [2C]	5.9	4.8	mg/Kg	2.41	ND	**245**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*8.56*		mg/Kg	9.62		89.0		30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.59*		mg/Kg	9.62		89.3		30-150			
Surrogate: Tetrachloro-m-xylene	*7.98*		mg/Kg	9.62		82.9		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.85*		mg/Kg	9.62		81.6		30-150			
Matrix Spike Dup (B350677-MSD1)	**Source: 23H3248-19**			Prepared: 08/31/23 Analyzed: 09/04/23							
Aroclor-1016	7.3	4.8	mg/Kg	2.42	ND	**303**	*	40-140	4.41	50	MS-21
Aroclor-1016 [2C]	12	4.8	mg/Kg	2.42	ND	**477**	*	40-140	5.91	50	MS-21
Aroclor-1260	5.1	4.8	mg/Kg	2.42	ND	**210**	*	40-140	7.53	50	MS-21
Aroclor-1260 [2C]	5.0	4.8	mg/Kg	2.42	ND	**205**	*	40-140	16.7	50	MS-21
Surrogate: Decachlorobiphenyl	*8.40*		mg/Kg	9.69		86.6		30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.43*		mg/Kg	9.69		86.9		30-150			
Surrogate: Tetrachloro-m-xylene	*7.72*		mg/Kg	9.69		79.6		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.71*		mg/Kg	9.69		79.5		30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-001-R03E

Lab Sample ID: 23H3248-01 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	37	
	2	0.000	0.000	0.000	37	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-002-R03S

Lab Sample ID: 23H3248-02

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	44	
	2	0.000	0.000	0.000	46	4.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-003-R03W

Lab Sample ID: 23H3248-03

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	42	
	2	0.000	0.000	0.000	43	2.4

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-004-R03C

Lab Sample ID: 23H3248-04 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	29	
	2	0.000	0.000	0.000	28	3.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-005-R03WT

Lab Sample ID: 23H3248-05 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	58	
	2	0.000	0.000	0.000	54	7.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-006-R03D

Lab Sample ID: 23H3248-06

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	40	
	2	0.000	0.000	0.000	41	2.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-007-R04E

Lab Sample ID: 23H3248-07

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	23	
	2	0.000	0.000	0.000	21	9.1

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-008-R04S

Lab Sample ID: 23H3248-08 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	17	
	2	0.000	0.000	0.000	15	12.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-009-R04W

Lab Sample ID: 23H3248-09

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	24	
	2	0.000	0.000	0.000	21	13.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-010-R04WT

Lab Sample ID: 23H3248-10 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	51	
	2	0.000	0.000	0.000	43	17.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-011-R04D

Lab Sample ID: 23H3248-11

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	50	
	2	0.000	0.000	0.000	49	2.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-012-RO5E

Lab Sample ID: 23H3248-12

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	17	
	2	0.000	0.000	0.000	18	5.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-013-R05S

Lab Sample ID: 23H3248-13

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	29	
	2	0.000	0.000	0.000	31	6.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-014-R05W

Lab Sample ID: 23H3248-14

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	22	
	2	0.000	0.000	0.000	21	4.7

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-015-R05C

Lab Sample ID: 23H3248-15

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	16	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-016-R05F

Lab Sample ID: 23H3248-16

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	21	10.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-017-R05WT

Lab Sample ID: 23H3248-17 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	35	
	2	0.000	0.000	0.000	34	2.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-018-R06E

Lab Sample ID: 23H3248-18

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	22	
	2	0.000	0.000	0.000	23	4.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-019-R06S

Lab Sample ID: 23H3248-19

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	21	
	2	0.000	0.000	0.000	20	4.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-020-R06C

Lab Sample ID: 23H3248-20

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	18	
	2	0.000	0.000	0.000	17	5.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B350677-BS1 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	2.0	5.1
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.8	5.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B350677-BSD1 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.9	17.1
Aroclor-1260	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.8	11.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B350677-MS1 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	7.7	
	2	0.000	0.000	0.000	12	43.7
Aroclor-1260	1	0.000	0.000	0.000	5.5	
	2	0.000	0.000	0.000	5.9	7.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B350677-MSD1 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	7.3	
	2	0.000	0.000	0.000	12	47.4
Aroclor-1260	1	0.000	0.000	0.000	5.1	
	2	0.000	0.000	0.000	5.0	2.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3248 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-001-R03E	8/14/2023	9:20	GRAB	O	U		1				x
2	P-002-R03S	8/14/2023	9:21	GRAB	O	U		1				x
3	P-003-R03W	8/14/2023	9:22	GRAB	O	U		1				x
4	P-004-R03C	8/14/2023	9:23	GRAB	O	U		1				x
5	P-005-R03WT	8/14/2023	9:24	GRAB	O	U		1				x
6	P-006-R03D	8/14/2023	9:25	GRAB	O	U		1				x
7	P-007-R04E	8/14/2023	9:30	GRAB	O	U		1				x
8	P-008-R04S	8/14/2023	9:31	GRAB	O	U		1				x
9	P-009-R04W	8/14/2023	9:32	GRAB	O	U		1				x
10	P-010-R04WT	8/14/2023	9:33	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23	1358
Received by: (signature)	Date/Time: 8/22/23	1258
Relinquished by: (signature)	Date/Time: 8/20/23	1744
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/21/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time:	1746
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3248 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-011-R04D	8/14/2023	9:34	GRAB	O	U		1				x
12	P-012-R05E	8/14/2023	9:50	GRAB	O	U		1				x
13	P-013-R05S	8/14/2023	9:51	GRAB	O	U		1				x
14	P-014-R05W	8/14/2023	9:52	GRAB	O	U		1				x
15	P-015-R05C	8/14/2023	9:53	GRAB	O	U		1				x
16	P-016-R05F	8/14/2023	9:54	GRAB	O	U		1				x
17	P-017-R05WT	8/14/2023	9:55	GRAB	O	U		1				x
18	P-018-R06E	8/14/2023	10:15	GRAB	O	U		1				x
19	P-019-R06S	8/14/2023	10:16	GRAB	O	U		3				x
20	P-020-R06C	8/14/2023	10:17	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1058	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1258	
Relinquished by: (signature)	Date/Time: 8/22/23 1745	
Received by: (signature) 7.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 17 46	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26, 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace Analytical Services	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics										VOA Vials						Other / Fill in				
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter		500mL	250mL																
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact				
1			—																											
2			—																											
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														
17																														
18				✓																										
19				3																										
20				1																										

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 6, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3250

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3250-01 6

23H3250-02 7

23H3250-03 8

23H3250-04 9

23H3250-05 10

23H3250-06 11

23H3250-07 12

23H3250-08 13

23H3250-09 14

23H3250-10 15

23H3250-11 16

23H3250-12 17

23H3250-13 18

23H3250-14 19

23H3250-15 20

23H3250-16 21

23H3250-17 22

23H3250-18 23

23H3250-19 24

23H3250-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B350678 27

Dual Column RPD Report 28

Flag/Qualifier Summary 50

Certifications 51

Chain of Custody/Sample Receipt 52

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/6/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3250

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

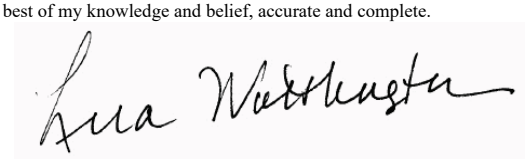
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-021-R06WT	23H3250-01	Paint		SW-846 8082A	
P-022-R06D	23H3250-02	Paint		SW-846 8082A	
P-023-R06F	23H3250-03	Paint		SW-846 8082A	
P-024-R05D	23H3250-04	Paint		SW-846 8082A	
P-025-R07E	23H3250-05	Paint		SW-846 8082A	
P-026-R07S	23H3250-06	Paint		SW-846 8082A	
P-027-R07C	23H3250-07	Paint		SW-846 8082A	
P-028-R07F	23H3250-08	Paint		SW-846 8082A	
P-029-R07WT	23H3250-09	Paint		SW-846 8082A	
P-030-R09E	23H3250-10	Paint		SW-846 8082A	
P-031-R09S	23H3250-11	Paint		SW-846 8082A	
P-032-R09S	23H3250-12	Paint		SW-846 8082A	
P-033-R08C	23H3250-13	Paint		SW-846 8082A	
P-034-R08F	23H3250-14	Paint		SW-846 8082A	
P-035-R08WT	23H3250-15	Paint		SW-846 8082A	
P-036-R08D	23H3250-16	Paint		SW-846 8082A	
P-037-R07D	23H3250-17	Paint		SW-846 8082A	
P-038-R09E	23H3250-18	Paint		SW-846 8082A	
P-039-R09S	23H3250-19	Paint		SW-846 8082A	
P-040-R09W	23H3250-20	Paint		SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-021-R06WT | Sampled: 8/14/2023 10:18

Sample ID: 23H3250-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1254 [2]	38	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	69.7	30-150		9/4/23 17:22
Decachlorobiphenyl [2]	71.3	30-150		9/4/23 17:22
Tetrachloro-m-xylene [1]	69.5	30-150		9/4/23 17:22
Tetrachloro-m-xylene [2]	70.7	30-150		9/4/23 17:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-022-R06D | Sampled: 8/14/2023 10:19

Sample ID: 23H3250-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1221 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1232 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1242 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1248 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1254 [1]	49	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1260 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1262 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG
Aroclor-1268 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.5	30-150		9/4/23 17:39
Decachlorobiphenyl [2]	75.5	30-150		9/4/23 17:39
Tetrachloro-m-xylene [1]	74.1	30-150		9/4/23 17:39
Tetrachloro-m-xylene [2]	73.1	30-150		9/4/23 17:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-023-R06F | Sampled: 8/14/2023 10:20

Sample ID: 23H3250-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1254 [1]	52	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 17:56	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	67.2	30-150		9/4/23 17:56
Decachlorobiphenyl [2]	68.2	30-150		9/4/23 17:56
Tetrachloro-m-xylene [1]	65.0	30-150		9/4/23 17:56
Tetrachloro-m-xylene [2]	64.0	30-150		9/4/23 17:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-024-R05D | Sampled: 8/14/2023 10:30

Sample ID: 23H3250-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1254 [2]	72	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:14	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	67.9	30-150		9/4/23 18:14
Decachlorobiphenyl [2]	68.9	30-150		9/4/23 18:14
Tetrachloro-m-xylene [1]	67.0	30-150		9/4/23 18:14
Tetrachloro-m-xylene [2]	65.7	30-150		9/4/23 18:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-025-R07E | Sampled: 8/14/2023 11:00

Sample ID: 23H3250-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1254 [1]	22	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.1	30-150		9/4/23 18:31
Decachlorobiphenyl [2]	83.9	30-150		9/4/23 18:31
Tetrachloro-m-xylene [1]	79.9	30-150		9/4/23 18:31
Tetrachloro-m-xylene [2]	78.2	30-150		9/4/23 18:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-026-R07S | Sampled: 8/14/2023 11:01

Sample ID: 23H3250-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1221 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1232 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1242 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1248 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1254 [2]	14	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1260 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1262 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG
Aroclor-1268 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 18:48	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.0	30-150		9/4/23 18:48
Decachlorobiphenyl [2]	88.2	30-150		9/4/23 18:48
Tetrachloro-m-xylene [1]	83.2	30-150		9/4/23 18:48
Tetrachloro-m-xylene [2]	82.4	30-150		9/4/23 18:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-027-R07C | Sampled: 8/14/2023 11:02

Sample ID: 23H3250-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1221 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1232 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1242 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1248 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1254 [1]	33	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1260 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1262 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG
Aroclor-1268 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:05	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.2	30-150		9/4/23 19:05
Decachlorobiphenyl [2]	84.7	30-150		9/4/23 19:05
Tetrachloro-m-xylene [1]	77.6	30-150		9/4/23 19:05
Tetrachloro-m-xylene [2]	78.5	30-150		9/4/23 19:05

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-028-R07F | Sampled: 8/14/2023 11:03

Sample ID: 23H3250-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1221 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1232 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1242 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1248 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1254 [2]	36	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1260 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1262 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG
Aroclor-1268 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	60.5	30-150		9/4/23 19:22
Decachlorobiphenyl [2]	60.9	30-150		9/4/23 19:22
Tetrachloro-m-xylene [1]	59.4	30-150		9/4/23 19:22
Tetrachloro-m-xylene [2]	59.7	30-150		9/4/23 19:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-029-R07WT | Sampled: 8/14/2023 11:04

Sample ID: 23H3250-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1254 [2]	35	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.2	30-150		9/4/23 19:39
Decachlorobiphenyl [2]	79.8	30-150		9/4/23 19:39
Tetrachloro-m-xylene [1]	78.6	30-150		9/4/23 19:39
Tetrachloro-m-xylene [2]	77.4	30-150		9/4/23 19:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-030-R09E | Sampled: 8/14/2023 11:15

Sample ID: 23H3250-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1254 [2]	20	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 19:57	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.7	30-150		9/4/23 19:57
Decachlorobiphenyl [2]	94.2	30-150		9/4/23 19:57
Tetrachloro-m-xylene [1]	87.4	30-150		9/4/23 19:57
Tetrachloro-m-xylene [2]	89.1	30-150		9/4/23 19:57

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-031-R09S | Sampled: 8/14/2023 11:16

Sample ID: 23H3250-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1221 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1232 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1242 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1248 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1254 [2]	16	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1260 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1262 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG
Aroclor-1268 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:17	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.7	30-150		9/4/23 21:17
Decachlorobiphenyl [2]	85.6	30-150		9/4/23 21:17
Tetrachloro-m-xylene [1]	79.9	30-150		9/4/23 21:17
Tetrachloro-m-xylene [2]	79.9	30-150		9/4/23 21:17

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-032-R09S | Sampled: 8/14/2023 11:17

Sample ID: 23H3250-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1221 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1232 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1242 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1248 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1254 [1]	11	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1260 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1262 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG
Aroclor-1268 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.6	30-150		9/4/23 21:34
Decachlorobiphenyl [2]	97.0	30-150		9/4/23 21:34
Tetrachloro-m-xylene [1]	96.1	30-150		9/4/23 21:34
Tetrachloro-m-xylene [2]	95.5	30-150		9/4/23 21:34

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-033-R08C | Sampled: 8/14/2023 11:18

Sample ID: 23H3250-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1254 [2]	20	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 21:51	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.2	30-150		9/4/23 21:51
Decachlorobiphenyl [2]	74.8	30-150		9/4/23 21:51
Tetrachloro-m-xylene [1]	74.4	30-150		9/4/23 21:51
Tetrachloro-m-xylene [2]	74.8	30-150		9/4/23 21:51

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-034-R08F | Sampled: 8/14/2023 11:19

Sample ID: 23H3250-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1254 [2]	51	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:08	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.0	30-150		9/4/23 22:08
Decachlorobiphenyl [2]	91.1	30-150		9/4/23 22:08
Tetrachloro-m-xylene [1]	87.7	30-150		9/4/23 22:08
Tetrachloro-m-xylene [2]	86.0	30-150		9/4/23 22:08

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-035-R08WT | Sampled: 8/14/2023 11:20

Sample ID: 23H3250-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1254 [2]	34	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:25	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.4	30-150		9/4/23 22:25
Decachlorobiphenyl [2]	79.8	30-150		9/4/23 22:25
Tetrachloro-m-xylene [1]	77.0	30-150		9/4/23 22:25
Tetrachloro-m-xylene [2]	77.4	30-150		9/4/23 22:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-036-R08D | Sampled: 8/14/2023 11:21

Sample ID: 23H3250-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1254 [2]	45	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 22:43	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.6	30-150		9/4/23 22:43
Decachlorobiphenyl [2]	97.1	30-150		9/4/23 22:43
Tetrachloro-m-xylene [1]	92.0	30-150		9/4/23 22:43
Tetrachloro-m-xylene [2]	91.2	30-150		9/4/23 22:43

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-037-R07D | Sampled: 8/14/2023 11:30

Sample ID: 23H3250-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1254 [1]	19	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/5/23 10:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.2	30-150		9/5/23 10:34
Decachlorobiphenyl [2]	86.0	30-150		9/5/23 10:34
Tetrachloro-m-xylene [1]	82.9	30-150		9/5/23 10:34
Tetrachloro-m-xylene [2]	81.4	30-150		9/5/23 10:34

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-038-R09E | Sampled: 8/14/2023 11:31

Sample ID: 23H3250-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1254 [2]	50	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:18	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.9	30-150		9/4/23 23:18
Decachlorobiphenyl [2]	79.6	30-150		9/4/23 23:18
Tetrachloro-m-xylene [1]	74.7	30-150		9/4/23 23:18
Tetrachloro-m-xylene [2]	74.3	30-150		9/4/23 23:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-039-R09S | Sampled: 8/14/2023 11:32

Sample ID: 23H3250-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1254 [2]	17	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:35	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.4	30-150		9/4/23 23:35
Decachlorobiphenyl [2]	95.5	30-150		9/4/23 23:35
Tetrachloro-m-xylene [1]	87.6	30-150		9/4/23 23:35
Tetrachloro-m-xylene [2]	86.6	30-150		9/4/23 23:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3250

Date Received: 8/22/2023

Field Sample #: P-040-R09W | Sampled: 8/14/2023 11:33

Sample ID: 23H3250-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1254 [2]	16	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	8/31/23	9/4/23 23:52	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.7	30-150		9/4/23 23:52
Decachlorobiphenyl [2]	87.6	30-150		9/4/23 23:52
Tetrachloro-m-xylene [1]	81.8	30-150		9/4/23 23:52
Tetrachloro-m-xylene [2]	81.6	30-150		9/4/23 23:52

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3250-01 [P-021-R06WT]	B350678	0.214	10.0	08/31/23
23H3250-02 [P-022-R06D]	B350678	0.269	10.0	08/31/23
23H3250-03 [P-023-R06F]	B350678	0.208	10.0	08/31/23
23H3250-04 [P-024-R05D]	B350678	0.203	10.0	08/31/23
23H3250-05 [P-025-R07E]	B350678	0.205	10.0	08/31/23
23H3250-06 [P-026-R07S]	B350678	0.221	10.0	08/31/23
23H3250-07 [P-027-R07C]	B350678	0.216	10.0	08/31/23
23H3250-08 [P-028-R07F]	B350678	0.242	10.0	08/31/23
23H3250-09 [P-029-R07WT]	B350678	0.230	10.0	08/31/23
23H3250-10 [P-030-R09E]	B350678	0.207	10.0	08/31/23
23H3250-11 [P-031-R09S]	B350678	0.267	10.0	08/31/23
23H3250-12 [P-032-R09S]	B350678	0.232	10.0	08/31/23
23H3250-13 [P-033-R08C]	B350678	0.239	10.0	08/31/23
23H3250-14 [P-034-R08F]	B350678	0.206	10.0	08/31/23
23H3250-15 [P-035-R08WT]	B350678	0.205	10.0	08/31/23
23H3250-16 [P-036-R08D]	B350678	0.205	10.0	08/31/23
23H3250-17 [P-037-R07D]	B350678	0.208	10.0	08/31/23
23H3250-18 [P-038-R09E]	B350678	0.204	10.0	08/31/23
23H3250-19 [P-039-R09S]	B350678	0.207	10.0	08/31/23
23H3250-20 [P-040-R09W]	B350678	0.228	10.0	08/31/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350678 - SW-846 3540C										
Blank (B350678-BLK1)				Prepared: 08/31/23 Analyzed: 09/04/23						
Aroclor-1016	ND	0.43	mg/Kg							
Aroclor-1016 [2C]	ND	0.43	mg/Kg							
Aroclor-1221	ND	0.43	mg/Kg							
Aroclor-1221 [2C]	ND	0.43	mg/Kg							
Aroclor-1232	ND	0.43	mg/Kg							
Aroclor-1232 [2C]	ND	0.43	mg/Kg							
Aroclor-1242	ND	0.43	mg/Kg							
Aroclor-1242 [2C]	ND	0.43	mg/Kg							
Aroclor-1248	ND	0.43	mg/Kg							
Aroclor-1248 [2C]	ND	0.43	mg/Kg							
Aroclor-1254	ND	0.43	mg/Kg							
Aroclor-1254 [2C]	ND	0.43	mg/Kg							
Aroclor-1260	ND	0.43	mg/Kg							
Aroclor-1260 [2C]	ND	0.43	mg/Kg							
Aroclor-1262	ND	0.43	mg/Kg							
Aroclor-1262 [2C]	ND	0.43	mg/Kg							
Aroclor-1268	ND	0.43	mg/Kg							
Aroclor-1268 [2C]	ND	0.43	mg/Kg							
Surrogate: Decachlorobiphenyl	*7.58*		mg/Kg	8.69		87.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.17*		mg/Kg	8.69		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*7.28*		mg/Kg	8.69		83.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.54*		mg/Kg	8.69		86.8	30-150			
LCS (B350678-BS1)				Prepared: 08/31/23 Analyzed: 09/04/23						
Aroclor-1016	6.2	0.42	mg/Kg	8.43		74.0	40-140			
Aroclor-1016 [2C]	6.8	0.42	mg/Kg	8.43		80.5	40-140			
Aroclor-1260	6.2	0.42	mg/Kg	8.43		73.1	40-140			
Aroclor-1260 [2C]	6.5	0.42	mg/Kg	8.43		77.4	40-140			
Surrogate: Decachlorobiphenyl	*7.26*		mg/Kg	8.43		86.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.82*		mg/Kg	8.43		92.7	30-150			
Surrogate: Tetrachloro-m-xylene	*7.02*		mg/Kg	8.43		83.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.29*		mg/Kg	8.43		86.5	30-150			
LCS Dup (B350678-BSD1)				Prepared: 08/31/23 Analyzed: 09/04/23						
Aroclor-1016	6.7	0.47	mg/Kg	9.45		71.0	40-140	7.31	30	
Aroclor-1016 [2C]	7.5	0.47	mg/Kg	9.45		79.6	40-140	10.3	30	
Aroclor-1260	6.9	0.47	mg/Kg	9.45		72.9	40-140	11.1	30	
Aroclor-1260 [2C]	7.6	0.47	mg/Kg	9.45		80.2	40-140	14.9	30	
Surrogate: Decachlorobiphenyl	*8.04*		mg/Kg	9.45		85.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.63*		mg/Kg	9.45		91.3	30-150			
Surrogate: Tetrachloro-m-xylene	*7.66*		mg/Kg	9.45		81.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.92*		mg/Kg	9.45		83.8	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-021-R06WT

Lab Sample ID: 23H3250-01 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	37	
	2	0.000	0.000	0.000	38	2.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-022-R06D

Lab Sample ID: 23H3250-02 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	49	
	2	0.000	0.000	0.000	49	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-023-R06F

Lab Sample ID: 23H3250-03

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	52	
	2	0.000	0.000	0.000	51	1.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-024-R05D

Lab Sample ID: 23H3250-04

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	71	
	2	0.000	0.000	0.000	72	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-025-R07E

Lab Sample ID: 23H3250-05

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	22	
	2	0.000	0.000	0.000	21	4.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-026-R07S

Lab Sample ID: 23H3250-06 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	14	
	2	0.000	0.000	0.000	14	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-027-R07C

Lab Sample ID: 23H3250-07 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	33	
	2	0.000	0.000	0.000	32	3.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-028-R07F

Lab Sample ID: 23H3250-08

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	35	
	2	0.000	0.000	0.000	36	2.8

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-029-R07WT

Lab Sample ID: 23H3250-09 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	34	
	2	0.000	0.000	0.000	35	2.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-030-R09E

Lab Sample ID: 23H3250-10

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	20	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-031-R09S

Lab Sample ID: 23H3250-11

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	16	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-032-R09S

Lab Sample ID: 23H3250-12

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	11	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-033-R08C

Lab Sample ID: 23H3250-13

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	20	
	2	0.000	0.000	0.000	20	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-034-R08F

Lab Sample ID: 23H3250-14

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	49	
	2	0.000	0.000	0.000	51	4.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-035-R08WT

Lab Sample ID: 23H3250-15 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	31	
	2	0.000	0.000	0.000	34	9.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-036-R08D

Lab Sample ID: 23H3250-16 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	43	
	2	0.000	0.000	0.000	45	4.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-037-R07D

Lab Sample ID: 23H3250-17

Date(s) Analyzed: 09/05/2023 09/05/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	18	5.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-038-R09E

Lab Sample ID: 23H3250-18 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	50	
	2	0.000	0.000	0.000	50	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-039-R09S

Lab Sample ID: 23H3250-19

Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	17	6.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-040-R09W

Lab Sample ID: 23H3250-20 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	16	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B350678-BS1 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	6.2	
	2	0.000	0.000	0.000	6.8	9.2
Aroclor-1260	1	0.000	0.000	0.000	6.2	
	2	0.000	0.000	0.000	6.5	4.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B350678-BSD1 Date(s) Analyzed: 09/04/2023 09/04/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	6.7	
	2	0.000	0.000	0.000	7.5	11.3
Aroclor-1260	1	0.000	0.000	0.000	6.9	
	2	0.000	0.000	0.000	7.6	9.7

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3250 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-021-R06WT	8/14/2023	10:18	GRAB	O	U		1				x
2	P-022-R06D	8/14/2023	10:19	GRAB	O	U		1				x
3	P-023-R06F	8/14/2023	10:20	GRAB	O	U		1				x
4	P-024-R05D	8/14/2023	10:30	GRAB	O	U		1				x
5	P-025-R07E	8/14/2023	11:00	GRAB	O	U		1				x
6	P-026-R07S	8/14/2023	11:01	GRAB	O	U		1				x
7	P-027-R07C	8/14/2023	11:02	GRAB	O	U		1				x
8	P-028-R07F	8/14/2023	11:03	GRAB	O	U		1				x
9	P-029-R07WT	8/14/2023	11:04	GRAB	O	U		1				x
10	P-030-R09E	8/14/2023	11:15	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 12:58
Received by: (signature)	Date/Time: 8/22/23 1258
Relinquished by: (signature)	Date/Time: 8/22/23 1741
Received by: (signature) 3.8 22, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

23H3250 RF

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-031-R09S	8/14/2023	11:16	GRAB	O	U		1				x
12	P-032-R09W	8/14/2023	11:17	GRAB	O	U		1				x
13	P-033-R08C	8/14/2023	11:18	GRAB	O	U		1				x
14	P-034-R08F	8/14/2023	11:19	GRAB	O	U		1				x
15	P-035-R08WT	8/14/2023	11:20	GRAB	O	U		1				x
16	P-036-R08D	8/14/2023	11:21	GRAB	O	U		1				x
17	P-037-R07D	8/14/2023	11:30	GRAB	O	U		1				x
18	P-038-R09E	8/14/2023	11:31	GRAB	O	U		1				x
19	P-039-R09S	8/14/2023	11:32	GRAB	O	U		1				x
20	P-040-R09W	8/14/2023	11:33	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	8/22/23 1258
Received by: (signature)	Date/Time:	8/22/23 1258
Relinquished by: (signature)	Date/Time:	8/22/23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time:	8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time:	8/22/23 1746
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mcm 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26, 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics												VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz (Amb)/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter			500mL		250mL							Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc												
1			1																															
2			1																															
3																																		
4																																		
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		
11																																		
12																																		
13																																		
14																																		
15																																		
16																																		
17																																		
18																																		
19																																		
20			✓																															

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 7, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3253

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3253-01 6

23H3253-02 7

23H3253-03 8

23H3253-04 9

23H3253-05 10

23H3253-06 11

23H3253-07 12

23H3253-08 13

23H3253-09 14

23H3253-10 15

23H3253-11 16

23H3253-12 17

23H3253-13 18

23H3253-14 19

23H3253-15 20

23H3253-16 21

23H3253-17 22

23H3253-18 23

23H3253-19 24

23H3253-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B350795 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/7/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3253

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-041-R09C	23H3253-01	Paint		SW-846 8082A	
P-042-R09F	23H3253-02	Paint		SW-846 8082A	
P-043-R09WT	23H3253-03	Paint		SW-846 8082A	
P-044-R09D	23H3253-04	Paint		SW-846 8082A	
P-045-R10E	23H3253-05	Paint		SW-846 8082A	
P-046-R10S	23H3253-06	Paint		SW-846 8082A	
P-047-R10W	23H3253-07	Paint		SW-846 8082A	
P-048-R18E	23H3253-08	Paint		SW-846 8082A	
P-049-R18S	23H3253-09	Paint		SW-846 8082A	
P-050-R18NB	23H3253-10	Paint		SW-846 8082A	
P-051-R18NC	23H3253-11	Paint		SW-846 8082A	
P-052-R18C	23H3253-12	Paint		SW-846 8082A	
P-053-R20E	23H3253-13	Paint		SW-846 8082A	
P-054-R20W	23H3253-14	Paint		SW-846 8082A	
P-055-R20NB	23H3253-15	Paint		SW-846 8082A	
P-056-R20NC	23H3253-16	Paint		SW-846 8082A	
P-057-R21EC	23H3253-17	Paint		SW-846 8082A	
P-058-R21EB	23H3253-18	Paint		SW-846 8082A	
P-059-R21S	23H3253-19	Paint		SW-846 8082A	
P-060-R21C	23H3253-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B350795-MS1, B350795-MSD1

Aroclor-1016 [2C]
B350795-MS1, B350795-MSD1

Aroclor-1260
B350795-MS1, B350795-MSD1

Aroclor-1260 [2C]
B350795-MS1, B350795-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

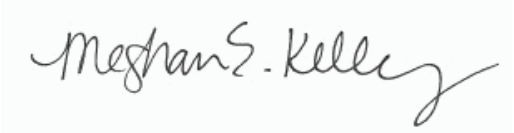
Decachlorobiphenyl
23H3253-09[P-049-R18S], 23H3253-11[P-051-R18NC], 23H3253-13[P-053-R20E], 23H3253-14[P-054-R20W], 23H3253-15[P-055-R20NB], 23H3253-16[P-056-R20NC], 23H3253-19[P-059-R21S]

Decachlorobiphenyl [2C]
23H3253-09[P-049-R18S], 23H3253-11[P-051-R18NC], 23H3253-13[P-053-R20E], 23H3253-14[P-054-R20W], 23H3253-15[P-055-R20NB], 23H3253-16[P-056-R20NC], 23H3253-19[P-059-R21S]

Tetrachloro-m-xylene
23H3253-09[P-049-R18S], 23H3253-11[P-051-R18NC], 23H3253-13[P-053-R20E], 23H3253-14[P-054-R20W], 23H3253-15[P-055-R20NB], 23H3253-16[P-056-R20NC], 23H3253-19[P-059-R21S]

Tetrachloro-m-xylene [2C]
23H3253-09[P-049-R18S], 23H3253-11[P-051-R18NC], 23H3253-13[P-053-R20E], 23H3253-14[P-054-R20W], 23H3253-15[P-055-R20NB], 23H3253-16[P-056-R20NC], 23H3253-19[P-059-R21S]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-041-R09C | Sampled: 8/14/2023 11:34

Sample ID: 23H3253-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1221 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1232 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1242 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1248 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1254 [2]	14	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1260 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1262 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG
Aroclor-1268 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 14:56	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.2	30-150		9/6/23 14:56
Decachlorobiphenyl [2]	87.1	30-150		9/6/23 14:56
Tetrachloro-m-xylene [1]	82.3	30-150		9/6/23 14:56
Tetrachloro-m-xylene [2]	81.0	30-150		9/6/23 14:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-042-R09F | Sampled: 8/14/2023 11:35

Sample ID: 23H3253-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1221 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1232 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1242 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1248 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1254 [2]	56	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1260 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1262 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG
Aroclor-1268 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:14	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.2	30-150		9/6/23 15:14
Decachlorobiphenyl [2]	79.8	30-150		9/6/23 15:14
Tetrachloro-m-xylene [1]	80.2	30-150		9/6/23 15:14
Tetrachloro-m-xylene [2]	80.4	30-150		9/6/23 15:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-043-R09WT | Sampled: 8/14/2023 11:36

Sample ID: 23H3253-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1254 [2]	27	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.1	30-150		9/6/23 15:31
Decachlorobiphenyl [2]	80.4	30-150		9/6/23 15:31
Tetrachloro-m-xylene [1]	78.1	30-150		9/6/23 15:31
Tetrachloro-m-xylene [2]	79.3	30-150		9/6/23 15:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-044-R09D | Sampled: 8/14/2023 11:37

Sample ID: 23H3253-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1221 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1232 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1242 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1248 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1254 [2]	31	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1260 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1262 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG
Aroclor-1268 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 15:49	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.0	30-150		9/6/23 15:49
Decachlorobiphenyl [2]	84.6	30-150		9/6/23 15:49
Tetrachloro-m-xylene [1]	77.5	30-150		9/6/23 15:49
Tetrachloro-m-xylene [2]	79.0	30-150		9/6/23 15:49

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-045-R10E | Sampled: 8/14/2023 12:00

Sample ID: 23H3253-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1221 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1232 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1242 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1248 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1254 [2]	13	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1260 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1262 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG
Aroclor-1268 [1]	ND	2.4	mg/Kg	5		SW-846 8082A	9/1/23	9/6/23 16:06	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.7	30-150		9/6/23 16:06
Decachlorobiphenyl [2]	90.9	30-150		9/6/23 16:06
Tetrachloro-m-xylene [1]	85.1	30-150		9/6/23 16:06
Tetrachloro-m-xylene [2]	86.9	30-150		9/6/23 16:06

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-046-R10S | Sampled: 8/14/2023 12:01

Sample ID: 23H3253-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1254 [2]	21	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:24	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.8	30-150		9/6/23 16:24
Decachlorobiphenyl [2]	91.3	30-150		9/6/23 16:24
Tetrachloro-m-xylene [1]	81.2	30-150		9/6/23 16:24
Tetrachloro-m-xylene [2]	83.5	30-150		9/6/23 16:24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-047-R10W | Sampled: 8/14/2023 12:02

Sample ID: 23H3253-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1254 [2]	19	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 16:41	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	100	30-150		9/6/23 16:41
Decachlorobiphenyl [2]	98.9	30-150		9/6/23 16:41
Tetrachloro-m-xylene [1]	90.8	30-150		9/6/23 16:41
Tetrachloro-m-xylene [2]	94.2	30-150		9/6/23 16:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-048-R18E | Sampled: 8/14/2023 12:10

Sample ID: 23H3253-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1221 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1232 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1242 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1248 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1254 [2]	180	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1260 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1262 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG
Aroclor-1268 [1]	ND	9.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 16:59	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/6/23 16:59
Decachlorobiphenyl [2]	97.5	30-150		9/6/23 16:59
Tetrachloro-m-xylene [1]	86.3	30-150		9/6/23 16:59
Tetrachloro-m-xylene [2]	89.4	30-150		9/6/23 16:59

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-049-R18S | Sampled: 8/14/2023 12:11

Sample ID: 23H3253-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1221 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1232 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1242 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1248 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1254 [1]	330	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1260 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1262 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG
Aroclor-1268 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 17:16	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 17:16
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 17:16
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 17:16
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 17:16

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-050-R18NB | Sampled: 8/14/2023 12:12

Sample ID: 23H3253-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1221 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1232 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1242 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1248 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1254 [1]	110	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1260 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1262 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG
Aroclor-1268 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 17:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.3	30-150		9/6/23 17:34
Decachlorobiphenyl [2]	83.4	30-150		9/6/23 17:34
Tetrachloro-m-xylene [1]	77.1	30-150		9/6/23 17:34
Tetrachloro-m-xylene [2]	78.6	30-150		9/6/23 17:34

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-051-R18NC | Sampled: 8/14/2023 12:13

Sample ID: 23H3253-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1221 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1232 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1242 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1248 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1254 [1]	290	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1260 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1262 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG
Aroclor-1268 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/1/23	9/6/23 19:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 19:31
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 19:31
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 19:31
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 19:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-052-R18C | Sampled: 8/14/2023 12:14

Sample ID: 23H3253-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1221 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1232 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1242 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1248 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1254 [2]	19	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1260 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1262 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG
Aroclor-1268 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 19:48	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	109	30-150		9/6/23 19:48
Decachlorobiphenyl [2]	103	30-150		9/6/23 19:48
Tetrachloro-m-xylene [1]	87.7	30-150		9/6/23 19:48
Tetrachloro-m-xylene [2]	87.9	30-150		9/6/23 19:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-053-R20E | Sampled: 8/14/2023 12:15

Sample ID: 23H3253-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1221 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1232 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1242 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1248 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1254 [1]	4000	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1260 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1262 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG
Aroclor-1268 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:06	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 20:06
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 20:06
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 20:06
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 20:06

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-054-R20W | Sampled: 8/14/2023 12:16

Sample ID: 23H3253-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1221 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1232 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1242 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1248 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1254 [1]	5100	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1260 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1262 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG
Aroclor-1268 [1]	ND	250	mg/Kg	500		SW-846 8082A	9/1/23	9/6/23 20:23	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 20:23
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 20:23
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 20:23
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 20:23

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-055-R20NB | Sampled: 8/14/2023 12:17

Sample ID: 23H3253-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1221 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1232 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1242 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1248 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1254 [1]	1300	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1260 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1262 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG
Aroclor-1268 [1]	ND	90	mg/Kg	200		SW-846 8082A	9/1/23	9/6/23 20:40	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 20:40
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 20:40
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 20:40
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 20:40

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-056-R20NC | Sampled: 8/14/2023 12:18

Sample ID: 23H3253-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1221 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1232 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1242 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1248 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1254 [1]	6400	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1260 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1262 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG
Aroclor-1268 [1]	ND	480	mg/Kg	1000		SW-846 8082A	9/1/23	9/6/23 20:58	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 20:58
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 20:58
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 20:58
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 20:58

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-057-R21EC | Sampled: 8/14/2023 12:30

Sample ID: 23H3253-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1221 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1232 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1242 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1248 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1254 [1]	86	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1260 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1262 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG
Aroclor-1268 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/1/23	9/6/23 21:15	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	112	30-150		9/6/23 21:15
Decachlorobiphenyl [2]	108	30-150		9/6/23 21:15
Tetrachloro-m-xylene [1]	103	30-150		9/6/23 21:15
Tetrachloro-m-xylene [2]	105	30-150		9/6/23 21:15

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-058-R21EB | Sampled: 8/14/2023 12:31

Sample ID: 23H3253-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1254 [1]	52	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 21:33	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	111	30-150		9/6/23 21:33
Decachlorobiphenyl [2]	106	30-150		9/6/23 21:33
Tetrachloro-m-xylene [1]	107	30-150		9/6/23 21:33
Tetrachloro-m-xylene [2]	108	30-150		9/6/23 21:33

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-059-R21S | Sampled: 8/14/2023 12:32

Sample ID: 23H3253-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1221 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1232 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1242 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1248 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1254 [1]	380	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1260 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1262 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG
Aroclor-1268 [1]	ND	47	mg/Kg	100		SW-846 8082A	9/1/23	9/6/23 21:50	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/6/23 21:50
Decachlorobiphenyl [2]	*	30-150	S-01	9/6/23 21:50
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/6/23 21:50
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/6/23 21:50

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3253

Date Received: 8/22/2023

Field Sample #: P-060-R21C | Sampled: 8/14/2023 12:33

Sample ID: 23H3253-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1221 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1232 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1242 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1248 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1254 [1]	50	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1260 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1262 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG
Aroclor-1268 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/1/23	9/6/23 22:08	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	110	30-150		9/6/23 22:08
Decachlorobiphenyl [2]	105	30-150		9/6/23 22:08
Tetrachloro-m-xylene [1]	96.7	30-150		9/6/23 22:08
Tetrachloro-m-xylene [2]	97.1	30-150		9/6/23 22:08

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3253-01 [P-041-R09C]	B350795	0.208	10.0	09/01/23
23H3253-02 [P-042-R09F]	B350795	0.200	10.0	09/01/23
23H3253-03 [P-043-R09WT]	B350795	0.204	10.0	09/01/23
23H3253-04 [P-044-R09D]	B350795	0.200	10.0	09/01/23
23H3253-05 [P-045-R10E]	B350795	0.207	10.0	09/01/23
23H3253-06 [P-046-R10S]	B350795	0.212	10.0	09/01/23
23H3253-07 [P-047-R10W]	B350795	0.206	10.0	09/01/23
23H3253-08 [P-048-R18E]	B350795	0.204	10.0	09/01/23
23H3253-09 [P-049-R18S]	B350795	0.207	10.0	09/01/23
23H3253-10 [P-050-R18NB]	B350795	0.228	10.0	09/01/23
23H3253-11 [P-051-R18NC]	B350795	0.204	10.0	09/01/23
23H3253-12 [P-052-R18C]	B350795	0.233	10.0	09/01/23
23H3253-13 [P-053-R20E]	B350795	0.204	10.0	09/01/23
23H3253-14 [P-054-R20W]	B350795	0.203	10.0	09/01/23
23H3253-15 [P-055-R20NB]	B350795	0.222	10.0	09/01/23
23H3253-16 [P-056-R20NC]	B350795	0.209	10.0	09/01/23
23H3253-17 [P-057-R21EC]	B350795	0.227	10.0	09/01/23
23H3253-18 [P-058-R21EB]	B350795	0.226	10.0	09/01/23
23H3253-19 [P-059-R21S]	B350795	0.214	10.0	09/01/23
23H3253-20 [P-060-R21C]	B350795	0.220	10.0	09/01/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350795 - SW-846 3540C										
Blank (B350795-BLK1)				Prepared: 09/01/23 Analyzed: 09/06/23						
Aroclor-1016	ND	0.50	mg/Kg							
Aroclor-1016 [2C]	ND	0.50	mg/Kg							
Aroclor-1221	ND	0.50	mg/Kg							
Aroclor-1221 [2C]	ND	0.50	mg/Kg							
Aroclor-1232	ND	0.50	mg/Kg							
Aroclor-1232 [2C]	ND	0.50	mg/Kg							
Aroclor-1242	ND	0.50	mg/Kg							
Aroclor-1242 [2C]	ND	0.50	mg/Kg							
Aroclor-1248	ND	0.50	mg/Kg							
Aroclor-1248 [2C]	ND	0.50	mg/Kg							
Aroclor-1254	ND	0.50	mg/Kg							
Aroclor-1254 [2C]	ND	0.50	mg/Kg							
Aroclor-1260	ND	0.50	mg/Kg							
Aroclor-1260 [2C]	ND	0.50	mg/Kg							
Aroclor-1262	ND	0.50	mg/Kg							
Aroclor-1262 [2C]	ND	0.50	mg/Kg							
Aroclor-1268	ND	0.50	mg/Kg							
Aroclor-1268 [2C]	ND	0.50	mg/Kg							
Surrogate: Decachlorobiphenyl	*9.40*		mg/Kg	10.0		94.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.64*		mg/Kg	10.0		86.4	30-150			
Surrogate: Tetrachloro-m-xylene	*9.06*		mg/Kg	10.0		90.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.73*		mg/Kg	10.0		87.3	30-150			
LCS (B350795-BS1)				Prepared: 09/01/23 Analyzed: 09/06/23						
Aroclor-1016	2.0	0.50	mg/Kg	2.50		78.8	40-140			
Aroclor-1016 [2C]	2.1	0.50	mg/Kg	2.50		86.0	40-140			
Aroclor-1260	2.1	0.50	mg/Kg	2.50		82.1	40-140			
Aroclor-1260 [2C]	2.1	0.50	mg/Kg	2.50		83.2	40-140			
Surrogate: Decachlorobiphenyl	*9.07*		mg/Kg	10.0		90.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.65*		mg/Kg	10.0		86.5	30-150			
Surrogate: Tetrachloro-m-xylene	*9.03*		mg/Kg	10.0		90.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.85*		mg/Kg	10.0		88.5	30-150			
LCS Dup (B350795-BSD1)				Prepared: 09/01/23 Analyzed: 09/06/23						
Aroclor-1016	2.2	0.50	mg/Kg	2.50		86.4	40-140	9.23	30	
Aroclor-1016 [2C]	1.7	0.50	mg/Kg	2.50		69.3	40-140	21.4	30	
Aroclor-1260	1.7	0.50	mg/Kg	2.50		67.1	40-140	20.0	30	
Aroclor-1260 [2C]	1.8	0.50	mg/Kg	2.50		71.0	40-140	15.9	30	
Surrogate: Decachlorobiphenyl	*7.44*		mg/Kg	10.0		74.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.11*		mg/Kg	10.0		71.1	30-150			
Surrogate: Tetrachloro-m-xylene	*4.62*		mg/Kg	10.0		46.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*4.55*		mg/Kg	10.0		45.5	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B350795 - SW-846 3540C											
Matrix Spike (B350795-MS1)	**Source: 23H3253-03**			Prepared: 09/01/23 Analyzed: 09/06/23							
Aroclor-1016	7.2	4.9	mg/Kg	2.43	ND	**298**	*	40-140			MS-21
Aroclor-1016 [2C]	11	4.9	mg/Kg	2.43	ND	**468**	*	40-140			MS-21
Aroclor-1260	8.8	4.9	mg/Kg	2.43	ND	**363**	*	40-140			MS-21
Aroclor-1260 [2C]	9.6	4.9	mg/Kg	2.43	ND	**396**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*8.50*		mg/Kg	9.72		87.4		30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.25*		mg/Kg	9.72		84.8		30-150			
Surrogate: Tetrachloro-m-xylene	*7.91*		mg/Kg	9.72		81.4		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.09*		mg/Kg	9.72		83.2		30-150			
Matrix Spike Dup (B350795-MSD1)	**Source: 23H3253-03**			Prepared: 09/01/23 Analyzed: 09/06/23							
Aroclor-1016	6.9	5.0	mg/Kg	2.49	ND	**276**	*	40-140	5.29	50	MS-21
Aroclor-1016 [2C]	10	5.0	mg/Kg	2.49	ND	**422**	*	40-140	8.23	50	MS-21
Aroclor-1260	8.2	5.0	mg/Kg	2.49	ND	**330**	*	40-140	7.31	50	MS-21
Aroclor-1260 [2C]	9.0	5.0	mg/Kg	2.49	ND	**362**	*	40-140	6.81	50	MS-21
Surrogate: Decachlorobiphenyl	*8.18*		mg/Kg	9.95		82.2		30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.99*		mg/Kg	9.95		80.3		30-150			
Surrogate: Tetrachloro-m-xylene	*7.74*		mg/Kg	9.95		77.7		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.89*		mg/Kg	9.95		79.3		30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-041-R09C

Lab Sample ID: 23H3253-01

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	14	15.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-042-R09F

Lab Sample ID: 23H3253-02 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	53	
	2	0.000	0.000	0.000	56	5.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-043-R09WT

Lab Sample ID: 23H3253-03 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	25	
	2	0.000	0.000	0.000	27	7.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-044-R09D

Lab Sample ID: 23H3253-04

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	27	
	2	0.000	0.000	0.000	31	13.8

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-045-R10E

Lab Sample ID: 23H3253-05

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	13	16.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-046-R10S

Lab Sample ID: 23H3253-06 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	21	
	2	0.000	0.000	0.000	21	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-047-R10W

Lab Sample ID: 23H3253-07

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	19	17.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-048-R18E

Lab Sample ID: 23H3253-08

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	170	
	2	0.000	0.000	0.000	180	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-049-R18S

Lab Sample ID: 23H3253-09 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	330	
	2	0.000	0.000	0.000	330	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-050-R18NB

Lab Sample ID: 23H3253-10 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	110	
	2	0.000	0.000	0.000	110	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-051-R18NC

Lab Sample ID: 23H3253-11

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	290	
	2	0.000	0.000	0.000	280	3.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-052-R18C

Lab Sample ID: 23H3253-12

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	18	
	2	0.000	0.000	0.000	19	5.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-053-R20E

Lab Sample ID: 23H3253-13

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4000	
	2	0.000	0.000	0.000	3900	2.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-054-R20W

Lab Sample ID: 23H3253-14 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5100	
	2	0.000	0.000	0.000	5000	2.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-055-R20NB

Lab Sample ID: 23H3253-15 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1300	
	2	0.000	0.000	0.000	1200	8.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-056-R20NC

Lab Sample ID: 23H3253-16

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	6400	
	2	0.000	0.000	0.000	6400	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-057-R21EC

Lab Sample ID: 23H3253-17

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	86	
	2	0.000	0.000	0.000	85	1.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-058-R21EB

Lab Sample ID: 23H3253-18

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	52	
	2	0.000	0.000	0.000	51	1.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-059-R21S

Lab Sample ID: 23H3253-19

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	380	
	2	0.000	0.000	0.000	370	2.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-060-R21C

Lab Sample ID: 23H3253-20

Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	50	
	2	0.000	0.000	0.000	48	4.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B350795-BS1 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	2.1	4.9
Aroclor-1260	1	0.000	0.000	0.000	2.1	
	2	0.000	0.000	0.000	2.1	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B350795-BSD1 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.2	
	2	0.000	0.000	0.000	1.7	25.6
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.8	5.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B350795-MS1 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	7.2	
	2	0.000	0.000	0.000	11	40.4
Aroclor-1260	1	0.000	0.000	0.000	8.8	
	2	0.000	0.000	0.000	9.6	8.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B350795-MSD1 Date(s) Analyzed: 09/06/2023 09/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	6.9	
	2	0.000	0.000	0.000	10	36.7
Aroclor-1260	1	0.000	0.000	0.000	8.2	
	2	0.000	0.000	0.000	9.0	9.3

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3253 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-041-R09C	8/14/2023	11:34	GRAB	O	U		1				x
2	P-042-R09F	8/14/2023	11:35	GRAB	O	U		1				x
3	P-043-R09WT	8/14/2023	11:36	GRAB	O	U		3				x
4	P-044-R09D	8/14/2023	11:37	GRAB	O	U		1				x
5	P-045-R10E	8/14/2023	12:00	GRAB	O	U		1				x
6	P-046-R10S	8/14/2023	12:01	GRAB	O	U		1				x
7	P-047-R10W	8/14/2023	12:02	GRAB	O	U		1				x
8	P-048-R18E	8/14/2023	12:10	GRAB	O	U		1				x
9	P-049-R18S	8/14/2023	12:11	GRAB	O	U		1				x
10	P-050-R18NB	8/14/2023	12:12	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 1258 8/14/23
Received by: (signature)	Date/Time: 8/22/23 1255
Relinquished by: (signature)	Date/Time: 8/22/23 1740
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3253 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Engineering, INC
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

O Field Filtered
O Lab to Filter

Orthophosphate Samples

O Field Filtered
O Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-051-R18NC	8/14/2023	12:13	GRAB	O	U		1				x
12	P-052-R18C	8/14/2023	12:14	GRAB	O	U		1				x
13	P-053-R20E	8/14/2023	12:15	GRAB	O	U		1				x
14	P-054-R20W	8/14/2023	12:16	GRAB	O	U		1				x
15	P-055-R20NB	8/14/2023	12:17	GRAB	O	U		1				x
16	P-056-R20NC	8/14/2023	12:18	GRAB	O	U		1				x
17	P-057-R21EC	8/14/2023	12:30	GRAB	O	U		1				x
18	P-058-R21EB	8/14/2023	12:31	GRAB	O	U		1				x
19	P-059-R21S	8/14/2023	12:32	GRAB	O	U		1				x
20	P-060-R21C	8/14/2023	12:33	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1258
Received by: (signature)	Date/Time: 8/22/23 1258
Relinquished by: (signature)	Date/Time: 8-22-23 1740
Received by: (signature) 38, 22, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1740
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mcm 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26, 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Quaitrax ID: 120836

Sample	Soils Jars (Circle Amb/Clear)			Ambers					Plastics												VOA Vials					Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			100mL	1 Liter		500mL		250mL															
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact				
1			1																												
2			1																												
3			3																												
4			1																												
5			1																												
6			1																												
7			1																												
8			1																												
9			1																												
10			1																												
11			1																												
12			1																												
13			1																												
14			1																												
15			1																												
16			1																												
17			1																												
18			1																												
19			1																												
20			1																												

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 7, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3255

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3255-01 6

23H3255-02 7

23H3255-03 8

23H3255-04 9

23H3255-05 10

23H3255-06 11

23H3255-07 12

23H3255-08 13

23H3255-09 14

23H3255-10 15

23H3255-11 16

23H3255-12 17

23H3255-13 18

23H3255-14 19

23H3255-15 20

23H3255-16 21

23H3255-17 22

23H3255-18 23

23H3255-19 24

23H3255-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351006 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/7/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3255

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-061-R21D	23H3255-01	Paint		SW-846 8082A	
P-062-S01S	23H3255-02	Paint		SW-846 8082A	
P-063-S01W	23H3255-03	Paint		SW-846 8082A	
P-064-S01N	23H3255-04	Paint		SW-846 8082A	
P-065-S01C	23H3255-05	Paint		SW-846 8082A	
P-066-S01C	23H3255-06	Paint		SW-846 8082A	
P-067-S01D	23H3255-07	Paint		SW-846 8082A	
P-068-R22EDW	23H3255-08	Paint		SW-846 8082A	
P-069-R22EC	23H3255-09	Paint		SW-846 8082A	
P-070-R22WPW	23H3255-10	Paint		SW-846 8082A	
P-071-R22WB	23H3255-11	Paint		SW-846 8082A	
P-072-R2D	23H3255-12	Paint		SW-846 8082A	
P-073-R22C	23H3255-13	Paint		SW-846 8082A	
P-074-R23EC	23H3255-14	Paint		SW-846 8082A	
P-075-R23EB	23H3255-15	Paint		SW-846 8082A	
P-076-R23EWT	23H3255-16	Paint		SW-846 8082A	
P-077-R23W	23H3255-17	Paint		SW-846 8082A	
P-078-R23N	23H3255-18	Paint		SW-846 8082A	
P-079-R23D	23H3255-19	Paint		SW-846 8082A	
P-080-R22SPW	23H3255-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351006-MS1, B351006-MSD1

Aroclor-1016 [2C]
B351006-MS1, B351006-MSD1

Aroclor-1260
B351006-MS1, B351006-MSD1

Aroclor-1260 [2C]
B351006-MS1, B351006-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
23H3255-09[P-069-R22EC], 23H3255-11[P-071-R22WB], 23H3255-12[P-072-R2D], 23H3255-14[P-074-R23EC], 23H3255-16[P-076-R23EWT], 23H3255-17[P-077-R23W], 23H3255-18[P-078-R23N], 23H3255-19[P-079-R23D], B351006-MS1, B351006-MSD1

Decachlorobiphenyl [2C]
23H3255-09[P-069-R22EC], 23H3255-11[P-071-R22WB], 23H3255-12[P-072-R2D], 23H3255-14[P-074-R23EC], 23H3255-16[P-076-R23EWT], 23H3255-17[P-077-R23W], 23H3255-18[P-078-R23N], 23H3255-19[P-079-R23D], B351006-MS1, B351006-MSD1

Tetrachloro-m-xylene
23H3255-09[P-069-R22EC], 23H3255-11[P-071-R22WB], 23H3255-12[P-072-R2D], 23H3255-14[P-074-R23EC], 23H3255-16[P-076-R23EWT], 23H3255-17[P-077-R23W], 23H3255-18[P-078-R23N], 23H3255-19[P-079-R23D], B351006-MS1, B351006-MSD1

Tetrachloro-m-xylene [2C]
23H3255-09[P-069-R22EC], 23H3255-11[P-071-R22WB], 23H3255-12[P-072-R2D], 23H3255-14[P-074-R23EC], 23H3255-16[P-076-R23EWT], 23H3255-17[P-077-R23W], 23H3255-18[P-078-R23N], 23H3255-19[P-079-R23D], B351006-MS1, B351006-MSD1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-061-R21D | Sampled: 8/14/2023 12:34

Sample ID: 23H3255-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1254 [1]	52	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:33	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	105	30-150		9/7/23 10:33
Decachlorobiphenyl [2]	101	30-150		9/7/23 10:33
Tetrachloro-m-xylene [1]	91.8	30-150		9/7/23 10:33
Tetrachloro-m-xylene [2]	91.4	30-150		9/7/23 10:33

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-062-S01S | Sampled: 8/14/2023 12:55

Sample ID: 23H3255-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1248 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1254 [2]	18	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1260 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 10:50	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	59.9	30-150		9/7/23 10:50
Decachlorobiphenyl [2]	58.3	30-150		9/7/23 10:50
Tetrachloro-m-xylene [1]	52.5	30-150		9/7/23 10:50
Tetrachloro-m-xylene [2]	51.5	30-150		9/7/23 10:50

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-063-S01W | Sampled: 8/14/2023 12:56

Sample ID: 23H3255-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1248 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1254 [2]	40	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1260 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 11:08	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/7/23 11:08
Decachlorobiphenyl [2]	98.0	30-150		9/7/23 11:08
Tetrachloro-m-xylene [1]	95.7	30-150		9/7/23 11:08
Tetrachloro-m-xylene [2]	87.7	30-150		9/7/23 11:08

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-064-S01N | Sampled: 8/14/2023 12:57

Sample ID: 23H3255-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1254 [2]	43	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:25	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.7	30-150		9/7/23 11:25
Decachlorobiphenyl [2]	93.9	30-150		9/7/23 11:25
Tetrachloro-m-xylene [1]	84.0	30-150		9/7/23 11:25
Tetrachloro-m-xylene [2]	82.6	30-150		9/7/23 11:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-065-S01C | Sampled: 8/14/2023 13:00

Sample ID: 23H3255-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1254 [1]	81	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:43	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.0	30-150		9/7/23 11:43
Decachlorobiphenyl [2]	78.1	30-150		9/7/23 11:43
Tetrachloro-m-xylene [1]	79.6	30-150		9/7/23 11:43
Tetrachloro-m-xylene [2]	80.6	30-150		9/7/23 11:43

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-066-S01C | Sampled: 8/14/2023 13:01

Sample ID: 23H3255-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1221 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1232 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1242 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1248 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1254 [1]	0.33	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1260 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1262 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG
Aroclor-1268 [1]	ND	0.20	mg/Kg	1		SW-846 8082A	9/5/23	9/7/23 12:00	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.0	30-150		9/7/23 12:00
Decachlorobiphenyl [2]	81.7	30-150		9/7/23 12:00
Tetrachloro-m-xylene [1]	77.7	30-150		9/7/23 12:00
Tetrachloro-m-xylene [2]	78.4	30-150		9/7/23 12:00

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-067-S01D | Sampled: 8/14/2023 13:02

Sample ID: 23H3255-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1254 [2]	65	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:18	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.5	30-150		9/7/23 12:18
Decachlorobiphenyl [2]	78.6	30-150		9/7/23 12:18
Tetrachloro-m-xylene [1]	70.8	30-150		9/7/23 12:18
Tetrachloro-m-xylene [2]	72.6	30-150		9/7/23 12:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-068-R22EDW | Sampled: 8/14/2023 13:30

Sample ID: 23H3255-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1254 [1]	52	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 12:35	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.0	30-150		9/7/23 12:35
Decachlorobiphenyl [2]	97.8	30-150		9/7/23 12:35
Tetrachloro-m-xylene [1]	87.9	30-150		9/7/23 12:35
Tetrachloro-m-xylene [2]	90.0	30-150		9/7/23 12:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-069-R22EC | Sampled: 8/14/2023 13:31

Sample ID: 23H3255-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1221 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1232 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1242 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1248 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1254 [1]	460	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1260 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1262 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG
Aroclor-1268 [1]	ND	40	mg/Kg	200		SW-846 8082A	9/5/23	9/7/23 12:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 12:53
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 12:53
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 12:53
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 12:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-070-R22WPW | Sampled: 8/14/2023 13:32

Sample ID: 23H3255-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1248 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1254 [2]	21	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1260 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 13:10	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	70.5	30-150		9/7/23 13:10
Decachlorobiphenyl [2]	68.7	30-150		9/7/23 13:10
Tetrachloro-m-xylene [1]	68.2	30-150		9/7/23 13:10
Tetrachloro-m-xylene [2]	69.2	30-150		9/7/23 13:10

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-071-R22WB | Sampled: 8/14/2023 13:33

Sample ID: 23H3255-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1221 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1232 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1242 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1248 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1254 [1]	280	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1260 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1262 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG
Aroclor-1268 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:23	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 10:23
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 10:23
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 10:23
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 10:23

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-072-R2D | Sampled: 8/14/2023 13:34

Sample ID: 23H3255-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1221 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1232 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1242 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1248 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1254 [1]	200	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1260 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1262 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG
Aroclor-1268 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 10:40	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 10:40
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 10:40
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 10:40
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 10:40

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-073-R22C | Sampled: 8/14/2023 13:35

Sample ID: 23H3255-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1254 [1]	67	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 10:57	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.1	30-150		9/7/23 10:57
Decachlorobiphenyl [2]	78.0	30-150		9/7/23 10:57
Tetrachloro-m-xylene [1]	72.7	30-150		9/7/23 10:57
Tetrachloro-m-xylene [2]	71.9	30-150		9/7/23 10:57

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-074-R23EC | Sampled: 8/14/2023 13:40

Sample ID: 23H3255-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1221 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1232 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1242 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1248 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1254 [1]	150	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1260 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1262 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG
Aroclor-1268 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:14	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 11:14
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 11:14
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 11:14
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 11:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-075-R23EB | Sampled: 8/14/2023 13:41

Sample ID: 23H3255-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1254 [1]	65	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 11:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.2	30-150		9/7/23 11:31
Decachlorobiphenyl [2]	83.1	30-150		9/7/23 11:31
Tetrachloro-m-xylene [1]	75.2	30-150		9/7/23 11:31
Tetrachloro-m-xylene [2]	74.0	30-150		9/7/23 11:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-076-R23EWT | Sampled: 8/14/2023 13:42

Sample ID: 23H3255-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1221 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1232 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1242 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1248 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1254 [2]	92	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1260 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1262 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG
Aroclor-1268 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:48	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 11:48
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 11:48
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 11:48
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 11:48

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-077-R23W | Sampled: 8/14/2023 13:43

Sample ID: 23H3255-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1221 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1232 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1242 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1248 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1254 [1]	120	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1260 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1262 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG
Aroclor-1268 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:05	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 12:05
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 12:05
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 12:05
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 12:05

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-078-R23N | Sampled: 8/14/2023 13:44

Sample ID: 23H3255-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1221 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1232 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1242 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1248 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1254 [1]	150	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1260 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1262 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG
Aroclor-1268 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 12:22
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 12:22
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 12:22
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 12:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-079-R23D | Sampled: 8/14/2023 13:45

Sample ID: 23H3255-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1221 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1232 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1242 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1248 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1254 [2]	75	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1260 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1262 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG
Aroclor-1268 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 12:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 12:39
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 12:39
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 12:39
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 12:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3255

Date Received: 8/22/2023

Field Sample #: P-080-R22SPW | Sampled: 8/14/2023 13:50

Sample ID: 23H3255-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1248 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1254 [1]	25	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1260 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 12:56	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.5	30-150		9/7/23 12:56
Decachlorobiphenyl [2]	89.3	30-150		9/7/23 12:56
Tetrachloro-m-xylene [1]	85.8	30-150		9/7/23 12:56
Tetrachloro-m-xylene [2]	86.9	30-150		9/7/23 12:56

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3255-01 [P-061-R21D]	B351006	0.502	10.0	09/05/23
23H3255-02 [P-062-S01S]	B351006	0.505	10.0	09/05/23
23H3255-03 [P-063-S01W]	B351006	0.496	10.0	09/05/23
23H3255-04 [P-064-S01N]	B351006	0.498	10.0	09/05/23
23H3255-05 [P-065-S01C]	B351006	0.503	10.0	09/05/23
23H3255-06 [P-066-S01C]	B351006	0.500	10.0	09/05/23
23H3255-07 [P-067-S01D]	B351006	0.502	10.0	09/05/23
23H3255-08 [P-068-R22EDW]	B351006	0.504	10.0	09/05/23
23H3255-09 [P-069-R22EC]	B351006	0.499	10.0	09/05/23
23H3255-10 [P-070-R22WPW]	B351006	0.502	10.0	09/05/23
23H3255-11 [P-071-R22WB]	B351006	0.501	10.0	09/05/23
23H3255-12 [P-072-R2D]	B351006	0.498	10.0	09/05/23
23H3255-13 [P-073-R22C]	B351006	0.505	10.0	09/05/23
23H3255-14 [P-074-R23EC]	B351006	0.497	10.0	09/05/23
23H3255-15 [P-075-R23EB]	B351006	0.501	10.0	09/05/23
23H3255-16 [P-076-R23EWT]	B351006	0.498	10.0	09/05/23
23H3255-17 [P-077-R23W]	B351006	0.504	10.0	09/05/23
23H3255-18 [P-078-R23N]	B351006	0.501	10.0	09/05/23
23H3255-19 [P-079-R23D]	B351006	0.508	10.0	09/05/23
23H3255-20 [P-080-R22SPW]	B351006	0.498	10.0	09/05/23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351006 - SW-846 3540C										
Blank (B351006-BLK1)				Prepared: 09/05/23 Analyzed: 09/07/23						
Aroclor-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Aroclor-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0.20	mg/Kg							
Aroclor-1254	ND	0.20	mg/Kg							
Aroclor-1254 [2C]	ND	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0.20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Aroclor-1268 [2C]	ND	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.52*		mg/Kg	4.00		88.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.32*		mg/Kg	4.00		82.9	30-150			
Surrogate: Tetrachloro-m-xylene	*3.41*		mg/Kg	4.00		85.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.33*		mg/Kg	4.00		83.4	30-150			
LCS (B351006-BS1)				Prepared: 09/05/23 Analyzed: 09/07/23						
Aroclor-1016	0.81	0.20	mg/Kg	1.00		80.8	40-140			
Aroclor-1016 [2C]	0.81	0.20	mg/Kg	1.00		80.9	40-140			
Aroclor-1260	0.78	0.20	mg/Kg	1.00		77.8	40-140			
Aroclor-1260 [2C]	0.71	0.20	mg/Kg	1.00		70.6	40-140			
Surrogate: Decachlorobiphenyl	*3.58*		mg/Kg	4.00		89.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.41*		mg/Kg	4.00		85.1	30-150			
Surrogate: Tetrachloro-m-xylene	*3.42*		mg/Kg	4.00		85.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.36*		mg/Kg	4.00		84.0	30-150			
LCS Dup (B351006-BSD1)				Prepared: 09/05/23 Analyzed: 09/07/23						
Aroclor-1016	0.80	0.20	mg/Kg	0.995		79.9	40-140	1.66	30	
Aroclor-1016 [2C]	0.79	0.20	mg/Kg	0.995		78.9	40-140	3.11	30	
Aroclor-1260	0.73	0.20	mg/Kg	0.995		73.3	40-140	6.49	30	
Aroclor-1260 [2C]	0.69	0.20	mg/Kg	0.995		69.8	40-140	1.77	30	
Surrogate: Decachlorobiphenyl	*3.48*		mg/Kg	3.98		87.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.33*		mg/Kg	3.98		83.6	30-150			
Surrogate: Tetrachloro-m-xylene	*3.27*		mg/Kg	3.98		82.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.19*		mg/Kg	3.98		80.3	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351006 - SW-846 3540C											
Matrix Spike (B351006-MS1)	**Source: 23H3255-09**			Prepared: 09/05/23 Analyzed: 09/07/23							
Aroclor-1016	62	40	mg/Kg	1.00	ND	**6230**	*	40-140			MS-21
Aroclor-1016 [2C]	140	40	mg/Kg	1.00	ND	**13800**	*	40-140			MS-21
Aroclor-1260	100	40	mg/Kg	1.00	ND	**10000**	*	40-140			MS-21
Aroclor-1260 [2C]	93	40	mg/Kg	1.00	ND	**9310**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	4.00			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	4.00			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	4.00			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	4.00			*	30-150			S-01
Matrix Spike Dup (B351006-MSD1)	**Source: 23H3255-09**			Prepared: 09/05/23 Analyzed: 09/07/23							
Aroclor-1016	62	39	mg/Kg	0.987	ND	**6250**	*	40-140	1.13	50	MS-21
Aroclor-1016 [2C]	130	39	mg/Kg	0.987	ND	**13700**	*	40-140	2.18	50	MS-21
Aroclor-1260	100	39	mg/Kg	0.987	ND	**10200**	*	40-140	0.420	50	MS-21
Aroclor-1260 [2C]	92	39	mg/Kg	0.987	ND	**9370**	*	40-140	0.770	50	MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	3.95			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	3.95			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	3.95			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	3.95			*	30-150			S-01

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-061-R21D

Lab Sample ID: 23H3255-01 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	52	
	2	0.000	0.000	0.000	49	5.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-062-S01S

Lab Sample ID: 23H3255-02 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	18	
	2	0.000	0.000	0.000	18	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-063-S01W

Lab Sample ID: 23H3255-03 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	37	
	2	0.000	0.000	0.000	40	7.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-064-S01N

Lab Sample ID: 23H3255-04 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	42	
	2	0.000	0.000	0.000	43	2.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-065-S01C

Lab Sample ID: 23H3255-05

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	81	
	2	0.000	0.000	0.000	80	2.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-066-S01C

Lab Sample ID: 23H3255-06

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.33	
	2	0.000	0.000	0.000	0.30	9.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-067-S01D

Lab Sample ID: 23H3255-07

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	64	
	2	0.000	0.000	0.000	65	1.6

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-068-R22EDW

Lab Sample ID: 23H3255-08

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	52	
	2	0.000	0.000	0.000	52	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-069-R22EC

Lab Sample ID: 23H3255-09

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	460	
	2	0.000	0.000	0.000	450	2.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-070-R22WPW

Lab Sample ID: 23H3255-10

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	20	
	2	0.000	0.000	0.000	21	4.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-071-R22WB

Lab Sample ID: 23H3255-11 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	280	
	2	0.000	0.000	0.000	270	3.6

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-072-R2D

Lab Sample ID: 23H3255-12 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	200	
	2	0.000	0.000	0.000	200	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-073-R22C

Lab Sample ID: 23H3255-13

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	67	
	2	0.000	0.000	0.000	65	3.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-074-R23EC

Lab Sample ID: 23H3255-14

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	150	
	2	0.000	0.000	0.000	150	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-075-R23EB

Lab Sample ID: 23H3255-15 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	65	
	2	0.000	0.000	0.000	62	4.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-076-R23EWT

Lab Sample ID: 23H3255-16

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	90	
	2	0.000	0.000	0.000	92	2.2

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-077-R23W

Lab Sample ID: 23H3255-17

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	120	
	2	0.000	0.000	0.000	110	8.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-078-R23N

Lab Sample ID: 23H3255-18

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	150	
	2	0.000	0.000	0.000	150	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-079-R23D

Lab Sample ID: 23H3255-19

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	74	
	2	0.000	0.000	0.000	75	1.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-080-R22SPW

Lab Sample ID: 23H3255-20

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	25	
	2	0.000	0.000	0.000	23	8.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351006-BS1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.81	
	2	0.000	0.000	0.000	0.81	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.78	
	2	0.000	0.000	0.000	0.71	9.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351006-BSD1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.79	1.3
Aroclor-1260	1	0.000	0.000	0.000	0.73	
	2	0.000	0.000	0.000	0.69	5.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351006-MS1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	62	
	2	0.000	0.000	0.000	140	77.2
Aroclor-1260	1	0.000	0.000	0.000	100	
	2	0.000	0.000	0.000	93	7.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351006-MSD1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	62	
	2	0.000	0.000	0.000	130	70.8
Aroclor-1260	1	0.000	0.000	0.000	100	
	2	0.000	0.000	0.000	92	8.3

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3255 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time			
7-Day	☑	10-Day	☐
PFAS 10-Day (std)	☐	Due Date:	

Rush-Approval Required			
1-Day	☐	3-Day	☐
2-Day	☐	4-Day	☐

Data Delivery	
Format:	PDF ☑ EXCEL ☑
Other:	Equis EDD
CLP Like Data Pkg Required:	☐
Email To:	tandrews@nobis-group.com
Fax To #:	

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

PCB ONLY

SOXHLET ☑

NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-061-R21D	8/14/2023	12:34	GRAB	O	U		1				x
2	P-062-S01S	8/14/2023	12:55	GRAB	O	U		1				x
3	P-063-S01W	8/14/2023	12:56	GRAB	O	U		1				x
4	P-064-S01N	8/14/2023	12:57	GRAB	O	U		1				x
5	P-065-S01R	8/14/2023	13:00	GRAB	O	U		1				x
6	P-066-S01C	8/14/2023	13:01	GRAB	O	U		1				x
7	P-067-S01D	8/14/2023	13:02	GRAB	O	U		1				x
8	P-068-R22EDW	8/14/2023	13:30	GRAB	O	U		1				x
9	P-069-R22EC	8/14/2023	13:31	GRAB	O	U		3				x
10	P-070-R22WPW	8/14/2023	13:32	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 1258 8/22/23
Received by: (signature)	Date/Time: 1258 8/22/23
Relinquished by: (signature)	Date/Time: 1746 8.22.23
Received by: (signature) 38, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements	
MA	
CT	
Other:	

Special Requirements	
☐	MA MCP Required
	MCP Certification Form Required
☐	CT RCP Required
	RCP Certification Form Required
☐	MA State DW Required
PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3255 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-071-R22WB	8/14/2023	13:33	GRAB	O	U		1				x
12	P-072-R2D	8/14/2023	13:34	GRAB	O	U		1				x
13	P-073-R22C	8/14/2023	13:35	GRAB	O	U		1				x
14	P-074-R23EC	8/14/2023	13:40	GRAB	O	U		1				x
15	P-075-R23EB	8/14/2023	13:41	GRAB	O	U		1				x
16	P-076-R23EWT	8/14/2023	13:42	GRAB	O	U		1				x
17	P-077-R23W	8/14/2023	13:43	GRAB	O	U		1				x
18	P-078-R23N	8/14/2023	13:44	GRAB	O	U		1				x
19	P-079-R23D	8/14/2023	13:45	GRAB	O	U		1				x
20	P-080-R22SPW	8/14/2023	13:50	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1355	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1355	
Relinquished by: (signature)	Date/Time: 8/22/23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis Group

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: ER 8/22/23 1746

Back-Sheet By / Date / Time: MCM 8/22/23 2217

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 22.26, 38.39, 56

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)			Ambers					Plastics														VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			100mL	1 Liter		500mL		250mL																		
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
1			1																															
2			1																															
3			1																															
4			1																															
5			1																															
6			1																															
7			1																															
8			1																															
9			3																															
10			1																															
11			1																															
12			1																															
13			1																															
14			1																															
15			1																															
16			1																															
17			1																															
18			1																															
19			1																															
20			1																															

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 14, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3256

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3256-01 6

23H3256-02 7

23H3256-03 8

23H3256-04 9

23H3256-05 10

23H3256-06 11

23H3256-07 12

23H3256-08 13

23H3256-09 14

23H3256-10 15

23H3256-11 16

23H3256-12 17

23H3256-13 18

23H3256-14 19

23H3256-15 20

23H3256-16 21

23H3256-17 22

23H3256-18 23

23H3256-19 24

23H3256-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351007 27

B351177 28

B351490 29

Dual Column RPD Report 31

Flag/Qualifier Summary 59

Certifications 60

Chain of Custody/Sample Receipt 61

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/14/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3256

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-081-R22SB	23H3256-01	Paint		SW-846 8082A	
P-082-R24E	23H3256-02	Paint		SW-846 8082A	
P-083-R24SC	23H3256-03	Paint		SW-846 8082A	
P-084-R24SB	23H3256-04	Paint		SW-846 8082A	
P-085-R24W	23H3256-05	Paint		SW-846 8082A	
P-086-R25E	23H3256-06	Paint		SW-846 8082A	
P-087-R25S	23H3256-07	Paint		SW-846 8082A	
P-088-R2SCDW	23H3256-08	Paint		SW-846 8082A	
P-089-R2SCP	23H3256-09	Paint		SW-846 8082A	
P-090-R25AE	23H3256-10	Paint		SW-846 8082A	
P-091-R25AS	23H3256-11	Paint		SW-846 8082A	
P-092-R25ACDW	23H3256-12	Paint		SW-846 8082A	
P-093-R25ACP	23H3256-13	Paint		SW-846 8082A	
P-094-R21W	23H3256-14	Paint		SW-846 8082A	
P-095-R21FN	23H3256-15	Paint		SW-846 8082A	
P-096-R21FS	23H3256-16	Paint		SW-846 8082A	
P-097-R24AS	23H3256-17	Paint		SW-846 8082A	
P-098-R24AW	23H3256-18	Paint		SW-846 8082A	
P-099-R24AN	23H3256-19	Paint		SW-846 8082A	
P-100-R24AC	23H3256-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351007-MS1, B351007-MSD1

Aroclor-1016 [2C]
B351007-MS1, B351007-MSD1

Aroclor-1260
B351007-MS1, B351007-MSD1

Aroclor-1260 [2C]
B351007-MS1, B351007-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
23H3256-01[P-081-R22SB], 23H3256-02[P-082-R24E], 23H3256-03[P-083-R24SC], 23H3256-04[P-084-R24SB], 23H3256-05[P-085-R24W], 23H3256-06RE1[P-086-R25E], 23H3256-07[P-087-R25S], 23H3256-10RE1[P-090-R25AE], 23H3256- 11[P-091-R25AS], 23H3256-18RE1[P-098-R24AW], 23H3256-19[P-099-R24AN], 23H3256-20[P-100-R24AC], B351007-MS1, B351007-MSD1

Decachlorobiphenyl [2C]
23H3256-01[P-081-R22SB], 23H3256-02[P-082-R24E], 23H3256-03[P-083-R24SC], 23H3256-04[P-084-R24SB], 23H3256-05[P-085-R24W], 23H3256-06RE1[P-086-R25E], 23H3256-07[P-087-R25S], 23H3256-10RE1[P-090-R25AE], 23H3256- 11[P-091-R25AS], 23H3256-18RE1[P-098-R24AW], 23H3256-19[P-099-R24AN], 23H3256-20[P-100-R24AC], B351007-MS1, B351007-MSD1

Tetrachloro-m-xylene
23H3256-01[P-081-R22SB], 23H3256-02[P-082-R24E], 23H3256-03[P-083-R24SC], 23H3256-04[P-084-R24SB], 23H3256-05[P-085-R24W], 23H3256-06RE1[P-086-R25E], 23H3256-07[P-087-R25S], 23H3256-10RE1[P-090-R25AE], 23H3256- 11[P-091-R25AS], 23H3256-18RE1[P-098-R24AW], 23H3256-19[P-099-R24AN], 23H3256-20[P-100-R24AC], B351007-MS1, B351007-MSD1

Tetrachloro-m-xylene [2C]
23H3256-01[P-081-R22SB], 23H3256-02[P-082-R24E], 23H3256-03[P-083-R24SC], 23H3256-04[P-084-R24SB], 23H3256-05[P-085-R24W], 23H3256-06RE1[P-086-R25E], 23H3256-07[P-087-R25S], 23H3256-10RE1[P-090-R25AE], 23H3256- 11[P-091-R25AS], 23H3256-18RE1[P-098-R24AW], 23H3256-19[P-099-R24AN], 23H3256-20[P-100-R24AC], B351007-MS1, B351007-MSD1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-081-R22SB | Sampled: 8/14/2023 13:51

Sample ID: 23H3256-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1221 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1232 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1242 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1248 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1254 [2]	400	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1260 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1262 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG
Aroclor-1268 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 9:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 9:37
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 9:37
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 9:37
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 9:37

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-082-R24E | Sampled: 8/14/2023 13:55

Sample ID: 23H3256-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1221 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1232 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1242 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1248 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1254 [1]	120	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1260 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1262 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG
Aroclor-1268 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 9:55	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 9:55
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 9:55
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 9:55
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 9:55

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-083-R24SC | Sampled: 8/14/2023 13:56

Sample ID: 23H3256-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1221 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1232 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1242 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1248 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1254 [1]	130	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1260 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1262 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG
Aroclor-1268 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:12	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 10:12
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 10:12
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 10:12
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 10:12

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-084-R24SB | Sampled: 8/14/2023 13:57

Sample ID: 23H3256-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1221 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1232 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1242 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1248 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1254 [1]	130	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1260 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1262 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG
Aroclor-1268 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:29	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 10:29
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 10:29
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 10:29
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 10:29

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-085-R24W | Sampled: 8/14/2023 13:58

Sample ID: 23H3256-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1221 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1232 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1242 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1248 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1254 [2]	110	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1260 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1262 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG
Aroclor-1268 [1]	ND	9.9	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 10:46	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 10:46
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 10:46
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 10:46
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 10:46

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-086-R25E | Sampled: 8/14/2023 14:35

Sample ID: 23H3256-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1221 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1232 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1242 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1248 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1254 [2]	300	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1260 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1262 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM
Aroclor-1268 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:04	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 22:04
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 22:04
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 22:04
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 22:04

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-087-R25S | Sampled: 8/14/2023 14:36

Sample ID: 23H3256-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1221 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1232 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1242 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1248 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1254 [2]	90	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1260 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1262 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG
Aroclor-1268 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 11:21	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 11:21
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 11:21
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 11:21
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 11:21

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-088-R2SCDW | Sampled: 8/14/2023 14:37

Sample ID: 23H3256-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1221 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1232 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1242 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1248 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1254 [1]	66	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1260 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1262 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM
Aroclor-1268 [1]	ND	7.5	mg/Kg	20		SW-846 8082A	9/8/23	9/12/23 22:22	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	109	30-150		9/12/23 22:22
Decachlorobiphenyl [2]	106	30-150		9/12/23 22:22
Tetrachloro-m-xylene [1]	97.9	30-150		9/12/23 22:22
Tetrachloro-m-xylene [2]	100	30-150		9/12/23 22:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-089-R2SCP | Sampled: 8/14/2023 14:38

Sample ID: 23H3256-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1221 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1232 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1242 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1248 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1254 [2]	56	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1260 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1262 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM
Aroclor-1268 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 17:39	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.2	30-150		9/8/23 17:39
Decachlorobiphenyl [2]	87.8	30-150		9/8/23 17:39
Tetrachloro-m-xylene [1]	86.9	30-150		9/8/23 17:39
Tetrachloro-m-xylene [2]	85.2	30-150		9/8/23 17:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-090-R25AE | Sampled: 8/14/2023 14:40

Sample ID: 23H3256-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1221 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1232 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1242 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1248 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1254 [2]	350	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1260 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1262 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM
Aroclor-1268 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 17:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 17:56
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 17:56
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 17:56
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 17:56

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-091-R25AS | Sampled: 8/14/2023 14:41

Sample ID: 23H3256-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1221 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1232 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1242 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1248 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1254 [2]	380	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1260 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1262 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG
Aroclor-1268 [1]	ND	20	mg/Kg	100		SW-846 8082A	9/5/23	9/7/23 13:33	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 13:33
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 13:33
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 13:33
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 13:33

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-092-R25ACDW | Sampled: 8/14/2023 14:42

Sample ID: 23H3256-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1254 [2]	37	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/8/23	9/12/23 22:39	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.3	30-150		9/12/23 22:39
Decachlorobiphenyl [2]	70.8	30-150		9/12/23 22:39
Tetrachloro-m-xylene [1]	37.8	30-150		9/12/23 22:39
Tetrachloro-m-xylene [2]	38.2	30-150		9/12/23 22:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-093-R25ACP | Sampled: 8/14/2023 14:43

Sample ID: 23H3256-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1221 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1232 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1242 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1248 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1254 [2]	30	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1260 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1262 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM
Aroclor-1268 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:13	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	67.5	30-150		9/8/23 18:13
Decachlorobiphenyl [2]	65.6	30-150		9/8/23 18:13
Tetrachloro-m-xylene [1]	64.6	30-150		9/8/23 18:13
Tetrachloro-m-xylene [2]	64.2	30-150		9/8/23 18:13

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-094-R21W | Sampled: 8/14/2023 14:44

Sample ID: 23H3256-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1254 [2]	51	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/6/23	9/8/23 18:30	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/8/23 18:30
Decachlorobiphenyl [2]	97.0	30-150		9/8/23 18:30
Tetrachloro-m-xylene [1]	92.4	30-150		9/8/23 18:30
Tetrachloro-m-xylene [2]	90.9	30-150		9/8/23 18:30

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-095-R21FN | Sampled: 8/14/2023 14:45

Sample ID: 23H3256-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1248 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1254 [2]	21	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1260 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:08	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.9	30-150		9/7/23 14:08
Decachlorobiphenyl [2]	88.9	30-150		9/7/23 14:08
Tetrachloro-m-xylene [1]	89.8	30-150		9/7/23 14:08
Tetrachloro-m-xylene [2]	88.0	30-150		9/7/23 14:08

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-096-R21FS | Sampled: 8/14/2023 14:46

Sample ID: 23H3256-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1248 [1]	9.9	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1254 [2]	16	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1260 [2]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	10		SW-846 8082A	9/5/23	9/7/23 14:25	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.4	30-150		9/7/23 14:25
Decachlorobiphenyl [2]	86.8	30-150		9/7/23 14:25
Tetrachloro-m-xylene [1]	88.4	30-150		9/7/23 14:25
Tetrachloro-m-xylene [2]	86.7	30-150		9/7/23 14:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-097-R24AS | Sampled: 8/14/2023 14:50

Sample ID: 23H3256-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1221 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1232 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1242 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1248 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1254 [2]	42	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1260 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1262 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG
Aroclor-1268 [1]	ND	4.1	mg/Kg	20		SW-846 8082A	9/5/23	9/7/23 14:42	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.3	30-150		9/7/23 14:42
Decachlorobiphenyl [2]	93.3	30-150		9/7/23 14:42
Tetrachloro-m-xylene [1]	92.3	30-150		9/7/23 14:42
Tetrachloro-m-xylene [2]	87.0	30-150		9/7/23 14:42

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-098-R24AW | Sampled: 8/14/2023 14:51

Sample ID: 23H3256-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1221 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1232 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1242 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1248 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1254 [1]	200	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1260 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1262 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM
Aroclor-1268 [1]	ND	18	mg/Kg	50		SW-846 8082A	9/6/23	9/8/23 18:47	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 18:47
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 18:47
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 18:47
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 18:47

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-099-R24AN | Sampled: 8/14/2023 14:52

Sample ID: 23H3256-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1221 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1232 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1242 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1248 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1254 [1]	150	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1260 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1262 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG
Aroclor-1268 [1]	ND	9.8	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 14:59	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 14:59
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 14:59
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 14:59
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 14:59

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3256

Date Received: 8/22/2023

Field Sample #: P-100-R24AC | Sampled: 8/14/2023 14:53

Sample ID: 23H3256-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1221 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1232 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1242 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1248 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1254 [2]	110	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1260 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1262 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG
Aroclor-1268 [1]	ND	10	mg/Kg	50		SW-846 8082A	9/5/23	9/7/23 15:17	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/7/23 15:17
Decachlorobiphenyl [2]	*	30-150	S-01	9/7/23 15:17
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/7/23 15:17
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/7/23 15:17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3256-01 [P-081-R22SB]	B351007	0.504	10.0	09/05/23
23H3256-02 [P-082-R24E]	B351007	0.508	10.0	09/05/23
23H3256-03 [P-083-R24SC]	B351007	0.505	10.0	09/05/23
23H3256-04 [P-084-R24SB]	B351007	0.498	10.0	09/05/23
23H3256-05 [P-085-R24W]	B351007	0.503	10.0	09/05/23
23H3256-07 [P-087-R25S]	B351007	0.498	10.0	09/05/23
23H3256-11 [P-091-R25AS]	B351007	0.498	10.0	09/05/23
23H3256-15 [P-095-R21FN]	B351007	0.503	10.0	09/05/23
23H3256-16 [P-096-R21FS]	B351007	0.506	10.0	09/05/23
23H3256-17 [P-097-R24AS]	B351007	0.492	10.0	09/05/23
23H3256-19 [P-099-R24AN]	B351007	0.510	10.0	09/05/23
23H3256-20 [P-100-R24AC]	B351007	0.499	10.0	09/05/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3256-09RE1 [P-089-R2SCP]	B351177	0.231	10.0	09/06/23
23H3256-10RE1 [P-090-R25AE]	B351177	0.253	10.0	09/06/23
23H3256-13RE1 [P-093-R25ACP]	B351177	0.265	10.0	09/06/23
23H3256-14RE1 [P-094-R21W]	B351177	0.255	10.0	09/06/23
23H3256-18RE1 [P-098-R24AW]	B351177	0.271	10.0	09/06/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3256-06RE1 [P-086-R25E]	B351490	0.216	10.0	09/08/23
23H3256-08RE1 [P-088-R2SCDW]	B351490	0.268	10.0	09/08/23
23H3256-12RE1 [P-092-R25ACDW]	B351490	0.227	10.0	09/08/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351007 - SW-846 3540C										
Blank (B351007-BLK1)				Prepared: 09/05/23 Analyzed: 09/07/23						
Aroclor-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Aroclor-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0.20	mg/Kg							
Aroclor-1254	ND	0.20	mg/Kg							
Aroclor-1254 [2C]	ND	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0.20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Aroclor-1268 [2C]	ND	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.41*		mg/Kg	3.94		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.56*		mg/Kg	3.94		90.3	30-150			
Surrogate: Tetrachloro-m-xylene	*3.58*		mg/Kg	3.94		90.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.65*		mg/Kg	3.94		92.7	30-150			
LCS (B351007-BS1)				Prepared: 09/05/23 Analyzed: 09/07/23						
Aroclor-1016	0.82	0.20	mg/Kg	1.00		82.3	40-140			
Aroclor-1016 [2C]	0.90	0.20	mg/Kg	1.00		89.5	40-140			
Aroclor-1260	0.81	0.20	mg/Kg	1.00		81.0	40-140			
Aroclor-1260 [2C]	0.86	0.20	mg/Kg	1.00		86.3	40-140			
Surrogate: Decachlorobiphenyl	*3.48*		mg/Kg	4.01		86.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.60*		mg/Kg	4.01		89.7	30-150			
Surrogate: Tetrachloro-m-xylene	*3.51*		mg/Kg	4.01		87.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.59*		mg/Kg	4.01		89.7	30-150			
LCS Dup (B351007-BSD1)				Prepared: 09/05/23 Analyzed: 09/07/23						
Aroclor-1016	0.87	0.20	mg/Kg	0.996		87.2	40-140	5.14	30	
Aroclor-1016 [2C]	1.0	0.20	mg/Kg	0.996		105	40-140	15.7	30	
Aroclor-1260	0.98	0.20	mg/Kg	0.996		98.7	40-140	19.1	30	
Aroclor-1260 [2C]	0.96	0.20	mg/Kg	0.996		96.5	40-140	10.5	30	
Surrogate: Decachlorobiphenyl	*3.46*		mg/Kg	3.98		86.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.71*		mg/Kg	3.98		93.1	30-150			
Surrogate: Tetrachloro-m-xylene	*3.64*		mg/Kg	3.98		91.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.65*		mg/Kg	3.98		91.6	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351007 - SW-846 3540C											
Matrix Spike (B351007-MS1)	**Source: 23H3256-01**			Prepared: 09/05/23 Analyzed: 09/07/23							
Aroclor-1016	42	20	mg/Kg	0.999	ND	**4160**	*	40-140			MS-21
Aroclor-1016 [2C]	120	20	mg/Kg	0.999	ND	**12300**	*	40-140			MS-21
Aroclor-1260	97	20	mg/Kg	0.999	ND	**9730**	*	40-140			MS-21
Aroclor-1260 [2C]	89	20	mg/Kg	0.999	ND	**8920**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	4.00			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	4.00			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	4.00			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	4.00			*	30-150			S-01
Matrix Spike Dup (B351007-MSD1)	**Source: 23H3256-01**			Prepared: 09/05/23 Analyzed: 09/07/23							
Aroclor-1016	31	20	mg/Kg	1.01	ND	**3120**	*	40-140	27.5	50	MS-21
Aroclor-1016 [2C]	84	20	mg/Kg	1.01	ND	**8340**	*	40-140	37.1	50	MS-21
Aroclor-1260	68	20	mg/Kg	1.01	ND	**6770**	*	40-140	35.0	50	MS-21
Aroclor-1260 [2C]	62	20	mg/Kg	1.01	ND	**6120**	*	40-140	36.3	50	MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	4.04			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	4.04			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	4.04			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	4.04			*	30-150			S-01
Batch B351177 - SW-846 3540C											
Blank (B351177-BLK1)				Prepared: 09/06/23 Analyzed: 09/08/23							
Aroclor-1016	ND	0.42	mg/Kg								
Aroclor-1016 [2C]	ND	0.42	mg/Kg								
Aroclor-1221	ND	0.42	mg/Kg								
Aroclor-1221 [2C]	ND	0.42	mg/Kg								
Aroclor-1232	ND	0.42	mg/Kg								
Aroclor-1232 [2C]	ND	0.42	mg/Kg								
Aroclor-1242	ND	0.42	mg/Kg								
Aroclor-1242 [2C]	ND	0.42	mg/Kg								
Aroclor-1248	ND	0.42	mg/Kg								
Aroclor-1248 [2C]	ND	0.42	mg/Kg								
Aroclor-1254	ND	0.42	mg/Kg								
Aroclor-1254 [2C]	ND	0.42	mg/Kg								
Aroclor-1260	ND	0.42	mg/Kg								
Aroclor-1260 [2C]	ND	0.42	mg/Kg								
Aroclor-1262	ND	0.42	mg/Kg								
Aroclor-1262 [2C]	ND	0.42	mg/Kg								
Aroclor-1268	ND	0.42	mg/Kg								
Aroclor-1268 [2C]	ND	0.42	mg/Kg								
Surrogate: Decachlorobiphenyl	*6.43*		mg/Kg	8.46		76.0		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.79*		mg/Kg	8.46		80.3		30-150			
Surrogate: Tetrachloro-m-xylene	*6.10*		mg/Kg	8.46		72.1		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.30*		mg/Kg	8.46		74.5		30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351177 - SW-846 3540C										
LCS (B351177-BS1)				Prepared: 09/06/23 Analyzed: 09/08/23						
Aroclor-1016	1.4	0.34	mg/Kg	1.69		84.3	40-140			
Aroclor-1016 [2C]	1.5	0.34	mg/Kg	1.69		88.9	40-140			
Aroclor-1260	1.2	0.34	mg/Kg	1.69		73.6	40-140			
Aroclor-1260 [2C]	1.4	0.34	mg/Kg	1.69		80.5	40-140			
Surrogate: Decachlorobiphenyl	*5.69*		mg/Kg	6.74		84.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.00*		mg/Kg	6.74		89.0	30-150			
Surrogate: Tetrachloro-m-xylene	*5.52*		mg/Kg	6.74		81.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*5.79*		mg/Kg	6.74		85.9	30-150			
LCS Dup (B351177-BSD1)				Prepared: 09/06/23 Analyzed: 09/08/23						
Aroclor-1016	1.7	0.41	mg/Kg	2.07		81.5	40-140	17.2	30	
Aroclor-1016 [2C]	1.8	0.41	mg/Kg	2.07		88.6	40-140	20.1	30	
Aroclor-1260	1.7	0.41	mg/Kg	2.07		80.2	40-140	29.0	30	
Aroclor-1260 [2C]	1.6	0.41	mg/Kg	2.07		79.7	40-140	19.4	30	
Surrogate: Decachlorobiphenyl	*7.06*		mg/Kg	8.28		85.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.27*		mg/Kg	8.28		87.8	30-150			
Surrogate: Tetrachloro-m-xylene	*6.54*		mg/Kg	8.28		79.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.78*		mg/Kg	8.28		81.9	30-150			
Batch B351490 - SW-846 3540C										
Blank (B351490-BLK1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.49	mg/Kg							
Aroclor-1016 [2C]	ND	0.49	mg/Kg							
Aroclor-1221	ND	0.49	mg/Kg							
Aroclor-1221 [2C]	ND	0.49	mg/Kg							
Aroclor-1232	ND	0.49	mg/Kg							
Aroclor-1232 [2C]	ND	0.49	mg/Kg							
Aroclor-1242	ND	0.49	mg/Kg							
Aroclor-1242 [2C]	ND	0.49	mg/Kg							
Aroclor-1248	ND	0.49	mg/Kg							
Aroclor-1248 [2C]	ND	0.49	mg/Kg							
Aroclor-1254	ND	0.49	mg/Kg							
Aroclor-1254 [2C]	ND	0.49	mg/Kg							
Aroclor-1260	ND	0.49	mg/Kg							
Aroclor-1260 [2C]	ND	0.49	mg/Kg							
Aroclor-1262	ND	0.49	mg/Kg							
Aroclor-1262 [2C]	ND	0.49	mg/Kg							
Aroclor-1268	ND	0.49	mg/Kg							
Aroclor-1268 [2C]	ND	0.49	mg/Kg							
Surrogate: Decachlorobiphenyl	*8.60*		mg/Kg	9.78		87.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.25*		mg/Kg	9.78		84.4	30-150			
Surrogate: Tetrachloro-m-xylene	*8.01*		mg/Kg	9.78		82.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.26*		mg/Kg	9.78		84.5	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351490 - SW-846 3540C										
LCS (B351490-BS1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Aroclor-1016	1.6	0.44	mg/Kg	2.21		73.7	40-140			
Aroclor-1016 [2C]	1.8	0.44	mg/Kg	2.21		79.3	40-140			
Aroclor-1260	1.7	0.44	mg/Kg	2.21		75.9	40-140			
Aroclor-1260 [2C]	1.6	0.44	mg/Kg	2.21		70.9	40-140			
Surrogate: Decachlorobiphenyl	*7.45*		mg/Kg	8.82		84.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.24*		mg/Kg	8.82		82.1	30-150			
Surrogate: Tetrachloro-m-xylene	*7.38*		mg/Kg	8.82		83.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.53*		mg/Kg	8.82		85.4	30-150			
LCS Dup (B351490-BSD1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Aroclor-1016	1.4	0.38	mg/Kg	1.91		75.4	40-140	12.3	30	
Aroclor-1016 [2C]	1.5	0.38	mg/Kg	1.91		80.3	40-140	13.4	30	
Aroclor-1260	1.6	0.38	mg/Kg	1.91		81.7	40-140	7.33	30	
Aroclor-1260 [2C]	1.5	0.38	mg/Kg	1.91		80.4	40-140	2.13	30	
Surrogate: Decachlorobiphenyl	*6.22*		mg/Kg	7.62		81.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.01*		mg/Kg	7.62		78.9	30-150			
Surrogate: Tetrachloro-m-xylene	*5.97*		mg/Kg	7.62		78.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.09*		mg/Kg	7.62		79.9	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-081-R22SB

Lab Sample ID: 23H3256-01 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	390	
	2	0.000	0.000	0.000	400	2.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-082-R24E

Lab Sample ID: 23H3256-02 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	120	
	2	0.000	0.000	0.000	120	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-083-R24SC

Lab Sample ID: 23H3256-03 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	130	
	2	0.000	0.000	0.000	130	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-084-R24SB

Lab Sample ID: 23H3256-04 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	130	
	2	0.000	0.000	0.000	130	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-085-R24W

Lab Sample ID: 23H3256-05 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	110	
	2	0.000	0.000	0.000	110	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-086-R25E

Lab Sample ID: 23H3256-06RE1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	300	
	2	0.000	0.000	0.000	300	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-087-R25S

Lab Sample ID: 23H3256-07

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	87	
	2	0.000	0.000	0.000	90	3.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-088-R2SCDW

Lab Sample ID: 23H3256-08RE1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	66	
	2	0.000	0.000	0.000	64	3.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-089-R2SCP

Lab Sample ID: 23H3256-09RE1

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	55	
	2	0.000	0.000	0.000	56	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-090-R25AE

Lab Sample ID: 23H3256-10RE1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	340	
	2	0.000	0.000	0.000	350	2.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-091-R25AS

Lab Sample ID: 23H3256-11

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	370	
	2	0.000	0.000	0.000	380	2.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-092-R25ACDW

Lab Sample ID: 23H3256-12RE1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	36	
	2	0.000	0.000	0.000	37	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-093-R25ACP

Lab Sample ID: 23H3256-13RE1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	28	
	2	0.000	0.000	0.000	30	6.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-094-R21W

Lab Sample ID: 23H3256-14RE1

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	49	
	2	0.000	0.000	0.000	51	4.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-095-R21FN

Lab Sample ID: 23H3256-15 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	20	
	2	0.000	0.000	0.000	21	4.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-096-R21FS

Lab Sample ID: 23H3256-16

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	9.9	
	2	0.000	0.000	0.000	8.0	21.2
Aroclor-1254	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-097-R24AS

Lab Sample ID: 23H3256-17

Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	42	
	2	0.000	0.000	0.000	42	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-098-R24AW

Lab Sample ID: 23H3256-18RE1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	200	
	2	0.000	0.000	0.000	190	5.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-099-R24AN

Lab Sample ID: 23H3256-19 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	150	
	2	0.000	0.000	0.000	140	6.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-100-R24AC

Lab Sample ID: 23H3256-20 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	100	
	2	0.000	0.000	0.000	110	9.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351007-BS1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.82	
	2	0.000	0.000	0.000	0.90	8.1
Aroclor-1260	1	0.000	0.000	0.000	0.81	
	2	0.000	0.000	0.000	0.86	6.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351007-BSD1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.87	
	2	0.000	0.000	0.000	1.0	13.9
Aroclor-1260	1	0.000	0.000	0.000	0.98	
	2	0.000	0.000	0.000	0.96	2.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351007-MS1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	42	
	2	0.000	0.000	0.000	120	96.3
Aroclor-1260	1	0.000	0.000	0.000	97	
	2	0.000	0.000	0.000	89	8.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351007-MSD1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	31	
	2	0.000	0.000	0.000	84	89.7
Aroclor-1260	1	0.000	0.000	0.000	68	
	2	0.000	0.000	0.000	62	9.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351177-BS1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.5	6.9
Aroclor-1260	1	0.000	0.000	0.000	1.2	
	2	0.000	0.000	0.000	1.4	15.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351177-BSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.8	5.7
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.6	6.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351490-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.8	11.8
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.6	6.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351490-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.5	6.9
Aroclor-1260	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.5	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3256 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-081-R22SB	8/14/2023	13:51	GRAB	O	U		3				x
2	P-082-R24E	8/14/2023	13:55	GRAB	O	U		1				x
3	P-083-R24SC	8/14/2023	13:56	GRAB	O	U		1				x
4	P-084-R24SB	8/14/2023	13:57	GRAB	O	U		1				x
5	P-085-R24W	8/14/2023	13:58	GRAB	O	U		1				x
6	P-086-R25E	8/14/2023	14:35	GRAB	O	U		1				x
7	P-087-R25S	8/14/2023	14:36	GRAB		U		1				x
8	P-088-R2SCDW	8/14/2023	14:37	GRAB	O	U		1				x
9	P-089-R2SCP	8/14/2023	14:38	GRAB	O	U		1				x
10	P-090-R25AE	8/14/2023	14:40	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 1238	
Received by: (signature)	Date/Time: 8/22/23 P55	
Relinquished by: (signature)	Date/Time: 8-22-23 1741	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3256 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-091-R25AS	8/14/2023	14:41	GRAB	O	U		1				x
12	P-092-R25ACDW	8/14/2023	14:42	GRAB	O	U		1				x
13	P-093-R25ACP	8/14/2023	14:43	GRAB	O	U		1				x
14	P-094-R21W	8/14/2023	14:44	GRAB	O	U		1				x
15	P-095-R21FN	8/14/2023	14:45	GRAB	O	U		1				x
16	P-096-R21FS	8/14/2023	14:46	GRAB	O	U		1				x
17	P-097-R24AS	8/14/2023	14:50	GRAB	O	U		1				x
18	P-098-R24AW	8/14/2023	14:51	GRAB	O	U		1				x
19	P-099-R24AN	8/14/2023	14:52	GRAB	O	U		1				x
20	P-100-R24AC	8/14/2023	14:53	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1255	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1358	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23 1746	
Relinquished by: (signature) 1.6, 5.6	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics												VOA Vials							Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			1 Liter		500mL		250mL								Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	100mL Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc												
1			3																															
2			1																															
3			1																															
4																																		
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		
11																																		
12																																		
13																																		
14																																		
15																																		
16																																		
17																																		
18																																		
19																																		
20																																		

Quaitrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 8, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3257

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3257-01 6

23H3257-02 7

23H3257-03 8

23H3257-04 9

23H3257-05 10

23H3257-06 11

23H3257-07 12

23H3257-08 13

23H3257-09 14

23H3257-10 15

23H3257-11 16

23H3257-12 17

23H3257-13 18

23H3257-14 19

23H3257-15 20

23H3257-16 21

23H3257-17 22

23H3257-18 23

23H3257-19 24

23H3257-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351008 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/8/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3257

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-101-R26E	23H3257-01	Paint		SW-846 8082A	
P-102-R26SC	23H3257-02	Paint		SW-846 8082A	
P-103-R26SB	23H3257-03	Paint		SW-846 8082A	
P-104-R26N	23H3257-04	Paint		SW-846 8082A	
P-105-R26C	23H3257-05	Paint		SW-846 8082A	
P-106-R-27S	23H3257-06	Paint		SW-846 8082A	
P-107-R27NC	23H3257-07	Paint		SW-846 8082A	
P-108-R27NB	23H3257-08	Paint		SW-846 8082A	
P-109-R27AE	23H3257-09	Paint		SW-846 8082A	
P-110-R27AW	23H3257-10	Paint		SW-846 8082A	
P-111-R28SC	23H3257-11	Paint		SW-846 8082A	
P-112-R28SB	23H3257-12	Paint		SW-846 8082A	
P-113-R28WC	23H3257-13	Paint		SW-846 8082A	
P-114-R28WB	23H3257-14	Paint		SW-846 8082A	
P-115-R28D	23H3257-15	Paint		SW-846 8082A	
P-116-29WC	23H3257-16	Paint		SW-846 8082A	
P-117-29WB	23H3257-17	Paint		SW-846 8082A	
P-118-29NB	23H3257-18	Paint		SW-846 8082A	
P-119-29NC	23H3257-19	Paint		SW-846 8082A	
P-120-R30E	23H3257-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351008-MS1, B351008-MSD1

Aroclor-1016 [2C]
B351008-MS1, B351008-MSD1

Aroclor-1260
B351008-MS1, B351008-MSD1

Aroclor-1260 [2C]
B351008-MS1, B351008-MSD1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-101-R26E | Sampled: 8/14/2023 15:10

Sample ID: 23H3257-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1221 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1232 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1242 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1248 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1254 [1]	41	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1260 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1262 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG
Aroclor-1268 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 7:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.1	30-150		9/8/23 7:53
Decachlorobiphenyl [2]	74.1	30-150		9/8/23 7:53
Tetrachloro-m-xylene [1]	72.2	30-150		9/8/23 7:53
Tetrachloro-m-xylene [2]	71.9	30-150		9/8/23 7:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-102-R26SC | Sampled: 8/14/2023 15:11

Sample ID: 23H3257-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1221 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1232 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1242 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1248 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1254 [1]	80	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1260 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1262 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG
Aroclor-1268 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:11	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.2	30-150		9/8/23 8:11
Decachlorobiphenyl [2]	85.9	30-150		9/8/23 8:11
Tetrachloro-m-xylene [1]	82.6	30-150		9/8/23 8:11
Tetrachloro-m-xylene [2]	81.7	30-150		9/8/23 8:11

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-103-R26SB | Sampled: 8/14/2023 15:12

Sample ID: 23H3257-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1221 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1232 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1242 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1248 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1254 [2]	36	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1260 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1262 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG
Aroclor-1268 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:28	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	93.2	30-150		9/8/23	8:28
Decachlorobiphenyl [2]	91.6	30-150		9/8/23	8:28
Tetrachloro-m-xylene [1]	84.9	30-150		9/8/23	8:28
Tetrachloro-m-xylene [2]	83.3	30-150		9/8/23	8:28

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-104-R26N | Sampled: 8/14/2023 15:13

Sample ID: 23H3257-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1221 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1232 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1242 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1248 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1254 [1]	42	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1260 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1262 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG
Aroclor-1268 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 8:45	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	79.9	30-150		9/8/23	8:45
Decachlorobiphenyl [2]	78.3	30-150		9/8/23	8:45
Tetrachloro-m-xylene [1]	73.6	30-150		9/8/23	8:45
Tetrachloro-m-xylene [2]	71.0	30-150		9/8/23	8:45

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-105-R26C | Sampled: 8/14/2023 15:14

Sample ID: 23H3257-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1221 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1232 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1242 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1248 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1254 [1]	7.9	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1260 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1262 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG
Aroclor-1268 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:02	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.9	30-150		9/8/23 9:02
Decachlorobiphenyl [2]	84.0	30-150		9/8/23 9:02
Tetrachloro-m-xylene [1]	80.0	30-150		9/8/23 9:02
Tetrachloro-m-xylene [2]	75.7	30-150		9/8/23 9:02

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-106-R-27S | Sampled: 8/14/2023 15:15

Sample ID: 23H3257-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1221 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1232 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1242 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1248 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1254 [1]	42	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1260 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1262 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG
Aroclor-1268 [1]	ND	5.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:19	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.7	30-150		9/8/23 9:19
Decachlorobiphenyl [2]	82.3	30-150		9/8/23 9:19
Tetrachloro-m-xylene [1]	79.5	30-150		9/8/23 9:19
Tetrachloro-m-xylene [2]	76.8	30-150		9/8/23 9:19

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-107-R27NC | Sampled: 8/14/2023 15:16

Sample ID: 23H3257-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1254 [1]	30	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:36	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.0	30-150		9/8/23 9:36
Decachlorobiphenyl [2]	94.4	30-150		9/8/23 9:36
Tetrachloro-m-xylene [1]	93.7	30-150		9/8/23 9:36
Tetrachloro-m-xylene [2]	89.3	30-150		9/8/23 9:36

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-108-R27NB | Sampled: 8/14/2023 15:17

Sample ID: 23H3257-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1221 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1232 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1242 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1248 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1254 [1]	50	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1260 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1262 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG
Aroclor-1268 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 9:54	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	91.3	30-150		9/8/23	9:54
Decachlorobiphenyl [2]	89.2	30-150		9/8/23	9:54
Tetrachloro-m-xylene [1]	85.1	30-150		9/8/23	9:54
Tetrachloro-m-xylene [2]	82.1	30-150		9/8/23	9:54

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-109-R27AE | Sampled: 8/14/2023 15:30

Sample ID: 23H3257-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1221 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1232 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1242 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1248 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1254 [2]	12	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1260 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1262 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG
Aroclor-1268 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:11	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.0	30-150		9/8/23 10:11
Decachlorobiphenyl [2]	91.6	30-150		9/8/23 10:11
Tetrachloro-m-xylene [1]	88.2	30-150		9/8/23 10:11
Tetrachloro-m-xylene [2]	85.3	30-150		9/8/23 10:11

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-110-R27AW | Sampled: 8/14/2023 15:31

Sample ID: 23H3257-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1254 [2]	23	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:28	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.2	30-150		9/8/23 10:28
Decachlorobiphenyl [2]	85.7	30-150		9/8/23 10:28
Tetrachloro-m-xylene [1]	74.7	30-150		9/8/23 10:28
Tetrachloro-m-xylene [2]	75.2	30-150		9/8/23 10:28

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-111-R28SC | Sampled: 8/14/2023 15:35

Sample ID: 23H3257-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1254 [1]	19	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 11:49	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.5	30-150		9/8/23 11:49
Decachlorobiphenyl [2]	86.8	30-150		9/8/23 11:49
Tetrachloro-m-xylene [1]	81.8	30-150		9/8/23 11:49
Tetrachloro-m-xylene [2]	82.2	30-150		9/8/23 11:49

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-112-R28SB | Sampled: 8/14/2023 15:36

Sample ID: 23H3257-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1221 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1232 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1242 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1248 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1254 [1]	11	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1260 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1262 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG
Aroclor-1268 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:06	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.7	30-150		9/8/23 12:06
Decachlorobiphenyl [2]	79.2	30-150		9/8/23 12:06
Tetrachloro-m-xylene [1]	74.9	30-150		9/8/23 12:06
Tetrachloro-m-xylene [2]	74.0	30-150		9/8/23 12:06

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-113-R28WC | Sampled: 8/14/2023 15:37

Sample ID: 23H3257-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1254 [2]	29	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:23	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.7	30-150		9/8/23 12:23
Decachlorobiphenyl [2]	86.0	30-150		9/8/23 12:23
Tetrachloro-m-xylene [1]	83.7	30-150		9/8/23 12:23
Tetrachloro-m-xylene [2]	82.2	30-150		9/8/23 12:23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-114-R28WB | Sampled: 8/14/2023 15:38

Sample ID: 23H3257-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1254 [1]	16	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:40	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.0	30-150		9/8/23 12:40
Decachlorobiphenyl [2]	90.2	30-150		9/8/23 12:40
Tetrachloro-m-xylene [1]	81.3	30-150		9/8/23 12:40
Tetrachloro-m-xylene [2]	80.6	30-150		9/8/23 12:40

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-115-R28D | Sampled: 8/14/2023 16:30

Sample ID: 23H3257-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1254 [1]	27	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:58	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.8	30-150		9/8/23 12:58
Decachlorobiphenyl [2]	82.5	30-150		9/8/23 12:58
Tetrachloro-m-xylene [1]	79.9	30-150		9/8/23 12:58
Tetrachloro-m-xylene [2]	79.0	30-150		9/8/23 12:58

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-116-29WC | Sampled: 8/14/2023 16:31

Sample ID: 23H3257-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1221 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1232 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1242 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1248 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1254 [1]	60	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1260 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1262 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG
Aroclor-1268 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:15	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.6	30-150		9/8/23 13:15
Decachlorobiphenyl [2]	92.1	30-150		9/8/23 13:15
Tetrachloro-m-xylene [1]	84.8	30-150		9/8/23 13:15
Tetrachloro-m-xylene [2]	84.8	30-150		9/8/23 13:15

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-117-29WB | Sampled: 8/14/2023 16:32

Sample ID: 23H3257-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1254 [2]	17	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:32	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.1	30-150		9/8/23 13:32
Decachlorobiphenyl [2]	87.6	30-150		9/8/23 13:32
Tetrachloro-m-xylene [1]	84.8	30-150		9/8/23 13:32
Tetrachloro-m-xylene [2]	81.9	30-150		9/8/23 13:32

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-118-29NB | Sampled: 8/14/2023 16:33

Sample ID: 23H3257-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1248 [2]	43	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1254 [2]	29	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 13:49	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.6	30-150		9/8/23 13:49
Decachlorobiphenyl [2]	90.9	30-150		9/8/23 13:49
Tetrachloro-m-xylene [1]	88.5	30-150		9/8/23 13:49
Tetrachloro-m-xylene [2]	85.8	30-150		9/8/23 13:49

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-119-29NC | Sampled: 8/14/2023 16:34

Sample ID: 23H3257-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1221 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1232 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1242 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1248 [2]	26	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1254 [2]	51	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1260 [2]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1262 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG
Aroclor-1268 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:06	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.4	30-150		9/8/23 14:06
Decachlorobiphenyl [2]	87.4	30-150		9/8/23 14:06
Tetrachloro-m-xylene [1]	84.4	30-150		9/8/23 14:06
Tetrachloro-m-xylene [2]	82.1	30-150		9/8/23 14:06

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3257

Date Received: 8/22/2023

Field Sample #: P-120-R30E | Sampled: 8/15/2023 08:30

Sample ID: 23H3257-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1254 [2]	170	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:23	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.8	30-150		9/8/23 14:23
Decachlorobiphenyl [2]	96.2	30-150		9/8/23 14:23
Tetrachloro-m-xylene [1]	100	30-150		9/8/23 14:23
Tetrachloro-m-xylene [2]	95.6	30-150		9/8/23 14:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3257-01 [P-101-R26E]	B351008	0.222	10.0	09/05/23
23H3257-02 [P-102-R26SC]	B351008	0.252	10.0	09/05/23
23H3257-03 [P-103-R26SB]	B351008	0.231	10.0	09/05/23
23H3257-04 [P-104-R26N]	B351008	0.279	10.0	09/05/23
23H3257-05 [P-105-R26C]	B351008	0.283	10.0	09/05/23
23H3257-06 [P-106-R-27S]	B351008	0.202	10.0	09/05/23
23H3257-07 [P-107-R27NC]	B351008	0.209	10.0	09/05/23
23H3257-08 [P-108-R27NB]	B351008	0.280	10.0	09/05/23
23H3257-09 [P-109-R27AE]	B351008	0.221	10.0	09/05/23
23H3257-10 [P-110-R27AW]	B351008	0.229	10.0	09/05/23
23H3257-11 [P-111-R28SC]	B351008	0.208	10.0	09/05/23
23H3257-12 [P-112-R28SB]	B351008	0.278	10.0	09/05/23
23H3257-13 [P-113-R28WC]	B351008	0.253	10.0	09/05/23
23H3257-14 [P-114-R28WB]	B351008	0.206	10.0	09/05/23
23H3257-15 [P-115-R28D]	B351008	0.238	10.0	09/05/23
23H3257-16 [P-116-29WC]	B351008	0.216	10.0	09/05/23
23H3257-17 [P-117-29WB]	B351008	0.227	10.0	09/05/23
23H3257-18 [P-118-29NB]	B351008	0.253	10.0	09/05/23
23H3257-19 [P-119-29NC]	B351008	0.220	10.0	09/05/23
23H3257-20 [P-120-R30E]	B351008	0.226	10.0	09/05/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351008 - SW-846 3540C										
Blank (B351008-BLK1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	ND	0.42	mg/Kg							
Aroclor-1016 [2C]	ND	0.42	mg/Kg							
Aroclor-1221	ND	0.42	mg/Kg							
Aroclor-1221 [2C]	ND	0.42	mg/Kg							
Aroclor-1232	ND	0.42	mg/Kg							
Aroclor-1232 [2C]	ND	0.42	mg/Kg							
Aroclor-1242	ND	0.42	mg/Kg							
Aroclor-1242 [2C]	ND	0.42	mg/Kg							
Aroclor-1248	ND	0.42	mg/Kg							
Aroclor-1248 [2C]	ND	0.42	mg/Kg							
Aroclor-1254	ND	0.42	mg/Kg							
Aroclor-1254 [2C]	ND	0.42	mg/Kg							
Aroclor-1260	ND	0.42	mg/Kg							
Aroclor-1260 [2C]	ND	0.42	mg/Kg							
Aroclor-1262	ND	0.42	mg/Kg							
Aroclor-1262 [2C]	ND	0.42	mg/Kg							
Aroclor-1268	ND	0.42	mg/Kg							
Aroclor-1268 [2C]	ND	0.42	mg/Kg							
Surrogate: Decachlorobiphenyl	*7.69*		mg/Kg	8.41		91.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.88*		mg/Kg	8.41		93.7	30-150			
Surrogate: Tetrachloro-m-xylene	*6.93*		mg/Kg	8.41		82.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.01*		mg/Kg	8.41		83.4	30-150			
LCS (B351008-BS1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	2.0	0.48	mg/Kg	2.42		83.5	40-140			
Aroclor-1016 [2C]	2.1	0.48	mg/Kg	2.42		88.0	40-140			
Aroclor-1260	1.9	0.48	mg/Kg	2.42		80.6	40-140			
Aroclor-1260 [2C]	1.9	0.48	mg/Kg	2.42		79.0	40-140			
Surrogate: Decachlorobiphenyl	*8.67*		mg/Kg	9.67		89.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*9.05*		mg/Kg	9.67		93.6	30-150			
Surrogate: Tetrachloro-m-xylene	*8.28*		mg/Kg	9.67		85.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.32*		mg/Kg	9.67		86.1	30-150			
LCS Dup (B351008-BSD1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	1.9	0.49	mg/Kg	2.43		78.2	40-140	6.01	30	
Aroclor-1016 [2C]	2.0	0.49	mg/Kg	2.43		80.6	40-140	8.18	30	
Aroclor-1260	1.8	0.49	mg/Kg	2.43		74.1	40-140	7.91	30	
Aroclor-1260 [2C]	1.9	0.49	mg/Kg	2.43		77.2	40-140	1.78	30	
Surrogate: Decachlorobiphenyl	*8.22*		mg/Kg	9.72		84.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.50*		mg/Kg	9.72		87.5	30-150			
Surrogate: Tetrachloro-m-xylene	*7.96*		mg/Kg	9.72		81.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.00*		mg/Kg	9.72		82.3	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351008 - SW-846 3540C											
Matrix Spike (B351008-MS1)	**Source: 23H3257-14**			Prepared: 09/05/23 Analyzed: 09/08/23							
Aroclor-1016	4.8	4.2	mg/Kg	2.11	ND	**229**	*	40-140			MS-21
Aroclor-1016 [2C]	8.0	4.2	mg/Kg	2.11	ND	**379**	*	40-140			MS-21
Aroclor-1260	6.0	4.2	mg/Kg	2.11	ND	**285**	*	40-140			MS-21
Aroclor-1260 [2C]	4.5	4.2	mg/Kg	2.11	ND	**212**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*8.92*		mg/Kg	8.46		105		30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.64*		mg/Kg	8.46		102		30-150			
Surrogate: Tetrachloro-m-xylene	*7.24*		mg/Kg	8.46		85.6		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.84*		mg/Kg	8.46		80.9		30-150			
Matrix Spike Dup (B351008-MSD1)	**Source: 23H3257-14**			Prepared: 09/05/23 Analyzed: 09/08/23							
Aroclor-1016	7.6	4.9	mg/Kg	2.44	ND	**312**	*	40-140	44.4	50	MS-21
Aroclor-1016 [2C]	13	4.9	mg/Kg	2.44	ND	**518**	*	40-140	45.0	50	MS-21
Aroclor-1260	9.4	4.9	mg/Kg	2.44	ND	**386**	*	40-140	44.1	50	MS-21
Aroclor-1260 [2C]	6.2	4.9	mg/Kg	2.44	ND	**254**	*	40-140	32.4	50	MS-21
Surrogate: Decachlorobiphenyl	*10.1*		mg/Kg	9.78		104		30-150			
Surrogate: Decachlorobiphenyl [2C]	*9.74*		mg/Kg	9.78		99.6		30-150			
Surrogate: Tetrachloro-m-xylene	*9.15*		mg/Kg	9.78		93.5		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.66*		mg/Kg	9.78		88.6		30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-101-R26E

Lab Sample ID: 23H3257-01 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	41	
	2	0.000	0.000	0.000	36	13.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-102-R26SC

Lab Sample ID: 23H3257-02 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	80	
	2	0.000	0.000	0.000	61	27.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-103-R26SB

Lab Sample ID: 23H3257-03 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	35	
	2	0.000	0.000	0.000	36	2.8

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-104-R26N

Lab Sample ID: 23H3257-04 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	42	
	2	0.000	0.000	0.000	34	21.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-105-R26C

Lab Sample ID: 23H3257-05 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.9	
	2	0.000	0.000	0.000	7.2	9.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-106-R-27S

Lab Sample ID: 23H3257-06 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	42	
	2	0.000	0.000	0.000	35	18.2

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-107-R27NC

Lab Sample ID: 23H3257-07

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	30	
	2	0.000	0.000	0.000	26	14.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-108-R27NB

Lab Sample ID: 23H3257-08 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	50	
	2	0.000	0.000	0.000	43	15.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-109-R27AE

Lab Sample ID: 23H3257-09

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	12	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-110-R27AW

Lab Sample ID: 23H3257-10

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	21	
	2	0.000	0.000	0.000	23	9.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-111-R28SC

Lab Sample ID: 23H3257-11 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	16	17.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-112-R28SB

Lab Sample ID: 23H3257-12 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	9.4	15.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-113-R28WC

Lab Sample ID: 23H3257-13 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	29	
	2	0.000	0.000	0.000	29	0.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-114-R28WB

Lab Sample ID: 23H3257-14 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	13	20.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-115-R28D

Lab Sample ID: 23H3257-15 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	27	
	2	0.000	0.000	0.000	22	20.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-116-29WC

Lab Sample ID: 23H3257-16 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	60	
	2	0.000	0.000	0.000	53	12.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-117-29WB

Lab Sample ID: 23H3257-17 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	17	6.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-118-29NB

Lab Sample ID: 23H3257-18 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	38	
	2	0.000	0.000	0.000	43	12.3
Aroclor-1254	1	0.000	0.000	0.000	24	
	2	0.000	0.000	0.000	29	18.9

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-119-29NC

Lab Sample ID: 23H3257-19 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	26	
	2	0.000	0.000	0.000	26	0.0
Aroclor-1254	1	0.000	0.000	0.000	47	
	2	0.000	0.000	0.000	51	8.2

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-120-R30E

Lab Sample ID: 23H3257-20 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	170	
	2	0.000	0.000	0.000	170	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351008-BS1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	2.1	4.9
Aroclor-1260	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.9	5.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351008-BSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	2.0	5.1
Aroclor-1260	1	0.000	0.000	0.000	1.8	
	2	0.000	0.000	0.000	1.9	5.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351008-MS1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	4.8	
	2	0.000	0.000	0.000	8.0	48.1
Aroclor-1260	1	0.000	0.000	0.000	6.0	
	2	0.000	0.000	0.000	4.5	28.6

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351008-MSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	7.6	
	2	0.000	0.000	0.000	13	52.4
Aroclor-1260	1	0.000	0.000	0.000	9.4	
	2	0.000	0.000	0.000	6.2	41.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3257 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-101-R26E	8/14/2023	15:10	GRAB	O	U		1				x
2	P-102-R26SC	8/14/2023	15:11	GRAB	O	U		1				x
3	P-103-R26SB	8/14/2023	15:12	GRAB	O	U		1				x
4	P-104-R26N	8/14/2023	15:13	GRAB	O	U		1				x
5	P-105-R26C	8/14/2023	15:14	GRAB	O	U		1				x
6	P-106-R-27S	8/14/2023	15:15	GRAB	O	U		1				x
7	P-107-R27NC	8/14/2023	15:16	GRAB	O	U		1				x
8	P-108-R27NB	8/14/2023	15:17	GRAB	O	U		1				x
9	P-109-R27AE	8/14/2023	15:30	GRAB	O	U		1				x
10	P-110-R27AW	8/14/2023	15:31	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 0958	
Received by: (signature)	Date/Time: 8/22/23 1255	
Relinquished by: (signature)	Date/Time: 8.22.23 1744	
Received by: (signature)	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23113257 RF

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-111-R28SC	8/14/2023	15:35	GRAB	O	U		1				x
12	P-112-R28SB	8/14/2023	15:36	GRAB	O	U		1				x
13	P-113-R28WC	8/14/2023	15:37	GRAB	O	U		1				x
14	P-114-R28WB	8/14/2023	15:38	GRAB	O	U		3				x
15	P-115-R28D	8/14/2023	16:30	GRAB	O	U		1				x
16	P-116-29WC	8/14/2023	16:31	GRAB	O	U		1				x
17	P-117-29WB	8/14/2023	16:32	GRAB	O	U		1				x
18	P-118-29NB	8/14/2023	16:33	GRAB	O	U		1				x
19	P-119-29NC	8/14/2023	16:34	GRAB	O	U		1				x
20	P-120-R30E	8/15/2023	8:30	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1255	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1255	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) GM AM 38, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time MCM 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26.38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Qualtrax ID: 120836

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics												VOA Vials				Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter		500mL		250mL								Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact				
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc										
1			–																													
2			–																													
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																
13																																
14				3																												
15				1																												
16				–																												
17																																
18																																
19																																
20				✓																												

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 11, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3258

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3258-01 6

23H3258-02 7

23H3258-03 8

23H3258-04 9

23H3258-05 10

23H3258-06 11

23H3258-07 12

23H3258-08 13

23H3258-09 14

23H3258-10 15

23H3258-11 16

23H3258-12 17

23H3258-13 18

23H3258-14 19

23H3258-15 20

23H3258-16 21

23H3258-17 22

23H3258-18 23

23H3258-19 24

23H3258-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351009 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/11/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3258

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-121-R30NC	23H3258-01	Product/Solid		SW-846 8082A	
P-122-R30NB	23H3258-02	Product/Solid		SW-846 8082A	
P-123-R30C	23H3258-03	Product/Solid		SW-846 8082A	
P-124-R31W	23H3258-04	Product/Solid		SW-846 8082A	
P-125-R31NC	23H3258-05	Product/Solid		SW-846 8082A	
P-126-R33E	23H3258-06	Product/Solid		SW-846 8082A	
P-127-R33NC	23H3258-07	Product/Solid		SW-846 8082A	
P-128-R34C	23H3258-08	Product/Solid		SW-846 8082A	
P-129-R35W	23H3258-09	Product/Solid		SW-846 8082A	
P-130-R37E	23H3258-10	Product/Solid		SW-846 8082A	
P-131-R37S	23H3258-11	Product/Solid		SW-846 8082A	
P-132-R31NB	23H3258-12	Product/Solid		SW-846 8082A	
P-133-R16EP	23H3258-13	Product/Solid		SW-846 8082A	
P-134-R16EW	23H3258-14	Product/Solid		SW-846 8082A	
P-135-R16WT	23H3258-15	Product/Solid		SW-846 8082A	
P-136-GN	23H3258-16	Product/Solid		SW-846 8082A	
P-137-GFN	23H3258-17	Product/Solid		SW-846 8082A	
P-138-GFE	23H3258-18	Product/Solid		SW-846 8082A	
P-139-GFS	23H3258-19	Product/Solid		SW-846 8082A	
P-140-GFW	23H3258-20	Product/Solid		SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Aroclor-1016

B351009-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl

23H3258-05[P-125-R31NC], 23H3258-06[P-126-R33E], 23H3258-07[P-127-R33NC], 23H3258-09[P-129-R35W], 23H3258-10[P-130-R37E], 23H3258- 11[P-131-R37S], 23H3258-12[P-132-R31NB]

Decachlorobiphenyl [2C]

23H3258-05[P-125-R31NC], 23H3258-06[P-126-R33E], 23H3258-07[P-127-R33NC], 23H3258-09[P-129-R35W], 23H3258-10[P-130-R37E], 23H3258- 11[P-131-R37S], 23H3258-12[P-132-R31NB]

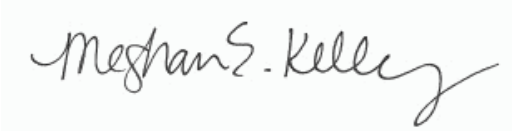
Tetrachloro-m-xylene

23H3258-05[P-125-R31NC], 23H3258-06[P-126-R33E], 23H3258-07[P-127-R33NC], 23H3258-09[P-129-R35W], 23H3258-10[P-130-R37E], 23H3258- 11[P-131-R37S], 23H3258-12[P-132-R31NB]

Tetrachloro-m-xylene [2C]

23H3258-05[P-125-R31NC], 23H3258-06[P-126-R33E], 23H3258-07[P-127-R33NC], 23H3258-09[P-129-R35W], 23H3258-10[P-130-R37E], 23H3258- 11[P-131-R37S], 23H3258-12[P-132-R31NB]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-121-R30NC | Sampled: 8/15/2023 08:31

Sample ID: 23H3258-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1221 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1232 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1242 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1248 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1254 [1]	130	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1260 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1262 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM
Aroclor-1268 [1]	ND	9.5	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:17	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.6	30-150		9/8/23 10:17
Decachlorobiphenyl [2]	89.8	30-150		9/8/23 10:17
Tetrachloro-m-xylene [1]	86.8	30-150		9/8/23 10:17
Tetrachloro-m-xylene [2]	82.7	30-150		9/8/23 10:17

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-122-R30NB | Sampled: 8/15/2023 08:32

Sample ID: 23H3258-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1221 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1232 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1242 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1248 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1254 [1]	94	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1260 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1262 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM
Aroclor-1268 [1]	ND	8.8	mg/Kg	20		SW-846 8082A	9/5/23	9/8/23 10:29	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	111	30-150		9/8/23 10:29
Decachlorobiphenyl [2]	105	30-150		9/8/23 10:29
Tetrachloro-m-xylene [1]	102	30-150		9/8/23 10:29
Tetrachloro-m-xylene [2]	99.2	30-150		9/8/23 10:29

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-123-R30C | Sampled: 8/15/2023 08:33

Sample ID: 23H3258-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1254 [2]	31	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.1	30-150		9/8/23 10:41
Decachlorobiphenyl [2]	84.8	30-150		9/8/23 10:41
Tetrachloro-m-xylene [1]	83.0	30-150		9/8/23 10:41
Tetrachloro-m-xylene [2]	82.4	30-150		9/8/23 10:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-124-R31W | Sampled: 8/15/2023 08:34

Sample ID: 23H3258-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1254 [2]	28	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 10:53	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.8	30-150		9/8/23 10:53
Decachlorobiphenyl [2]	69.0	30-150		9/8/23 10:53
Tetrachloro-m-xylene [1]	63.9	30-150		9/8/23 10:53
Tetrachloro-m-xylene [2]	63.9	30-150		9/8/23 10:53

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-125-R31NC | Sampled: 8/15/2023 08:35

Sample ID: 23H3258-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1221 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1232 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1242 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1248 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1254 [1]	160	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1260 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1262 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM
Aroclor-1268 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:11	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 11:11
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 11:11
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 11:11
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 11:11

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-126-R33E | Sampled: 8/15/2023 08:36

Sample ID: 23H3258-06

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1221 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1232 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1242 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1248 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1254 [1]	300	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1260 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1262 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM
Aroclor-1268 [1]	ND	23	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:28	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 11:28
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 11:28
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 11:28
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 11:28

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-127-R33NC | Sampled: 8/15/2023 08:37

Sample ID: 23H3258-07

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1221 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1232 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1242 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1248 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1254 [1]	310	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1260 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1262 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM
Aroclor-1268 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 11:46	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 11:46
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 11:46
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 11:46
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 11:46

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-128-R34C | Sampled: 8/15/2023 08:38

Sample ID: 23H3258-08

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1221 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1232 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1242 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1248 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1254 [1]	43	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1260 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1262 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM
Aroclor-1268 [1]	ND	4.9	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 12:03	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.8	30-150		9/8/23 12:03
Decachlorobiphenyl [2]	94.5	30-150		9/8/23 12:03
Tetrachloro-m-xylene [1]	81.4	30-150		9/8/23 12:03
Tetrachloro-m-xylene [2]	82.3	30-150		9/8/23 12:03

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-129-R35W | Sampled: 8/15/2023 08:39

Sample ID: 23H3258-09

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1221 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1232 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1242 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1248 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1254 [2]	180	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1260 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1262 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM
Aroclor-1268 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:21	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 12:21
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 12:21
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 12:21
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 12:21

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-130-R37E | Sampled: 8/15/2023 08:40

Sample ID: 23H3258-10

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1221 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1232 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1242 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1248 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1254 [1]	400	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1260 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1262 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM
Aroclor-1268 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 12:38	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 12:38
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 12:38
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 12:38
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 12:38

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-131-R37S | Sampled: 8/15/2023 08:41

Sample ID: 23H3258-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1221 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1232 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1242 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1248 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1254 [1]	270	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1260 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1262 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM
Aroclor-1268 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:00	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 14:00
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 14:00
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 14:00
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 14:00

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-132-R31NB | Sampled: 8/15/2023 10:00

Sample ID: 23H3258-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1221 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1232 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1242 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1248 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1254 [1]	250	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1260 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1262 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM
Aroclor-1268 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/5/23	9/8/23 14:17	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/8/23 14:17
Decachlorobiphenyl [2]	*	30-150	S-01	9/8/23 14:17
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/8/23 14:17
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/8/23 14:17

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-133-R16EP | Sampled: 8/15/2023 12:59

Sample ID: 23H3258-13

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1221 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1232 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1242 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1248 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1254 [2]	5.5	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1260 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1262 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM
Aroclor-1268 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 14:35	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	65.4	30-150		9/8/23 14:35
Decachlorobiphenyl [2]	64.0	30-150		9/8/23 14:35
Tetrachloro-m-xylene [1]	61.5	30-150		9/8/23 14:35
Tetrachloro-m-xylene [2]	62.2	30-150		9/8/23 14:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-134-R16EW | Sampled: 8/15/2023 13:00

Sample ID: 23H3258-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1221 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1232 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1242 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1248 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1254 [2]	21	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1260 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1262 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM
Aroclor-1268 [1]	ND	4.0	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 14:52	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.4	30-150		9/8/23 14:52
Decachlorobiphenyl [2]	92.6	30-150		9/8/23 14:52
Tetrachloro-m-xylene [1]	84.5	30-150		9/8/23 14:52
Tetrachloro-m-xylene [2]	85.0	30-150		9/8/23 14:52

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-135-R16WT | Sampled: 8/15/2023 13:01

Sample ID: 23H3258-15

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1221 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1232 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1242 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1248 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1254 [1]	33	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1260 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1262 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM
Aroclor-1268 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/5/23	9/8/23 15:10	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.2	30-150		9/8/23 15:10
Decachlorobiphenyl [2]	86.2	30-150		9/8/23 15:10
Tetrachloro-m-xylene [1]	80.0	30-150		9/8/23 15:10
Tetrachloro-m-xylene [2]	81.0	30-150		9/8/23 15:10

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-136-GN | Sampled: 8/15/2023 13:15

Sample ID: 23H3258-16

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1221 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1232 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1242 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1248 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1254 [2]	6.1	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1260 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1262 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM
Aroclor-1268 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:27	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	61.1	30-150		9/8/23 15:27
Decachlorobiphenyl [2]	61.8	30-150		9/8/23 15:27
Tetrachloro-m-xylene [1]	62.1	30-150		9/8/23 15:27
Tetrachloro-m-xylene [2]	82.1	30-150		9/8/23 15:27

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-137-GFN | Sampled: 8/15/2023 13:16

Sample ID: 23H3258-17

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1221 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1232 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1242 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1248 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1254 [2]	3.0	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1260 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1262 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM
Aroclor-1268 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 15:45	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	61.9	30-150		9/8/23 15:45
Decachlorobiphenyl [2]	64.3	30-150		9/8/23 15:45
Tetrachloro-m-xylene [1]	63.7	30-150		9/8/23 15:45
Tetrachloro-m-xylene [2]	65.9	30-150		9/8/23 15:45

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-138-GFE | Sampled: 8/15/2023 13:17

Sample ID: 23H3258-18

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1221 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1232 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1242 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1248 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1254 [2]	3.6	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1260 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1262 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM
Aroclor-1268 [1]	ND	0.49	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:02	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.4	30-150		9/8/23 16:02
Decachlorobiphenyl [2]	73.8	30-150		9/8/23 16:02
Tetrachloro-m-xylene [1]	71.7	30-150		9/8/23 16:02
Tetrachloro-m-xylene [2]	74.2	30-150		9/8/23 16:02

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-139-GFS | Sampled: 8/15/2023 13:18

Sample ID: 23H3258-19

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1221 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1232 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1242 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1248 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1254 [1]	7.1	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1260 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1262 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM
Aroclor-1268 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:20	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.1	30-150		9/8/23 16:20
Decachlorobiphenyl [2]	78.9	30-150		9/8/23 16:20
Tetrachloro-m-xylene [1]	78.6	30-150		9/8/23 16:20
Tetrachloro-m-xylene [2]	81.2	30-150		9/8/23 16:20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3258

Date Received: 8/22/2023

Field Sample #: P-140-GFW | Sampled: 8/15/2023 13:19

Sample ID: 23H3258-20

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1221 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1232 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1242 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1248 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1254 [2]	4.1	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1260 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1262 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM
Aroclor-1268 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 16:37	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	76.3	30-150		9/8/23 16:37
Decachlorobiphenyl [2]	78.6	30-150		9/8/23 16:37
Tetrachloro-m-xylene [1]	82.7	30-150		9/8/23 16:37
Tetrachloro-m-xylene [2]	85.3	30-150		9/8/23 16:37

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3258-01 [P-121-R30NC]	B351009	0.211	10.0	09/05/23
23H3258-02 [P-122-R30NB]	B351009	0.228	10.0	09/05/23
23H3258-03 [P-123-R30C]	B351009	0.227	10.0	09/05/23
23H3258-04 [P-124-R31W]	B351009	0.213	10.0	09/05/23
23H3258-05 [P-125-R31NC]	B351009	0.225	10.0	09/05/23
23H3258-06 [P-126-R33E]	B351009	0.216	10.0	09/05/23
23H3258-07 [P-127-R33NC]	B351009	0.230	10.0	09/05/23
23H3258-08 [P-128-R34C]	B351009	0.204	10.0	09/05/23
23H3258-09 [P-129-R35W]	B351009	0.254	10.0	09/05/23
23H3258-10 [P-130-R37E]	B351009	0.251	10.0	09/05/23
23H3258-11 [P-131-R37S]	B351009	0.206	10.0	09/05/23
23H3258-12 [P-132-R31NB]	B351009	0.232	10.0	09/05/23
23H3258-13 [P-133-R16EP]	B351009	0.218	10.0	09/05/23
23H3258-14 [P-134-R16EW]	B351009	0.248	10.0	09/05/23
23H3258-15 [P-135-R16WT]	B351009	0.262	10.0	09/05/23
23H3258-16 [P-136-GN]	B351009	0.222	10.0	09/05/23
23H3258-17 [P-137-GFN]	B351009	0.201	10.0	09/05/23
23H3258-18 [P-138-GFE]	B351009	0.204	10.0	09/05/23
23H3258-19 [P-139-GFS]	B351009	0.234	10.0	09/05/23
23H3258-20 [P-140-GFW]	B351009	0.221	10.0	09/05/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351009 - SW-846 3540C										
Blank (B351009-BLK1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	ND	0.48	mg/Kg							
Aroclor-1016 [2C]	ND	0.48	mg/Kg							
Aroclor-1221	ND	0.48	mg/Kg							
Aroclor-1221 [2C]	ND	0.48	mg/Kg							
Aroclor-1232	ND	0.48	mg/Kg							
Aroclor-1232 [2C]	ND	0.48	mg/Kg							
Aroclor-1242	ND	0.48	mg/Kg							
Aroclor-1242 [2C]	ND	0.48	mg/Kg							
Aroclor-1248	ND	0.48	mg/Kg							
Aroclor-1248 [2C]	ND	0.48	mg/Kg							
Aroclor-1254	ND	0.48	mg/Kg							
Aroclor-1254 [2C]	ND	0.48	mg/Kg							
Aroclor-1260	ND	0.48	mg/Kg							
Aroclor-1260 [2C]	ND	0.48	mg/Kg							
Aroclor-1262	ND	0.48	mg/Kg							
Aroclor-1262 [2C]	ND	0.48	mg/Kg							
Aroclor-1268	ND	0.48	mg/Kg							
Aroclor-1268 [2C]	ND	0.48	mg/Kg							
Surrogate: Decachlorobiphenyl	*6.28*		mg/Kg	9.58		65.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.00*		mg/Kg	9.58		62.6	30-150			
Surrogate: Tetrachloro-m-xylene	*5.68*		mg/Kg	9.58		59.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*5.98*		mg/Kg	9.58		62.4	30-150			
LCS (B351009-BS1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	1.5	0.46	mg/Kg	2.30		64.4	40-140			
Aroclor-1016 [2C]	1.4	0.46	mg/Kg	2.30		63.0	40-140			
Aroclor-1260	1.2	0.46	mg/Kg	2.30		53.7	40-140			
Aroclor-1260 [2C]	1.3	0.46	mg/Kg	2.30		58.3	40-140			
Surrogate: Decachlorobiphenyl	*5.72*		mg/Kg	9.19		62.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*5.61*		mg/Kg	9.19		61.1	30-150			
Surrogate: Tetrachloro-m-xylene	*5.44*		mg/Kg	9.19		59.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*5.65*		mg/Kg	9.19		61.5	30-150			
LCS Dup (B351009-BSD1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	1.2	0.35	mg/Kg	1.74		67.1	40-140	23.5	30	
Aroclor-1016 [2C]	1.3	0.35	mg/Kg	1.74		75.8	40-140	9.26	30	
Aroclor-1260	1.0	0.35	mg/Kg	1.74		58.7	40-140	18.7	30	
Aroclor-1260 [2C]	1.1	0.35	mg/Kg	1.74		63.9	40-140	18.5	30	
Surrogate: Decachlorobiphenyl	*4.55*		mg/Kg	6.97		65.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*4.40*		mg/Kg	6.97		63.1	30-150			
Surrogate: Tetrachloro-m-xylene	*4.16*		mg/Kg	6.97		59.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*4.32*		mg/Kg	6.97		62.1	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351009 - SW-846 3540C											
Matrix Spike (B351009-MS1)	**Source: 23H3258-16**			Prepared: 09/05/23 Analyzed: 09/08/23							
Aroclor-1016	2.7	0.41	mg/Kg	2.06	ND	131		40-140			
Aroclor-1016 [2C]	2.3	0.41	mg/Kg	2.06	ND	112		40-140			
Aroclor-1260	1.7	0.41	mg/Kg	2.06	ND	81.5		40-140			
Aroclor-1260 [2C]	1.6	0.41	mg/Kg	2.06	ND	76.1		40-140			
Surrogate: Decachlorobiphenyl	*4.15*		mg/Kg	8.24		50.4		30-150			
Surrogate: Decachlorobiphenyl [2C]	*4.33*		mg/Kg	8.24		52.5		30-150			
Surrogate: Tetrachloro-m-xylene	*4.29*		mg/Kg	8.24		52.1		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*5.01*		mg/Kg	8.24		60.8		30-150			
Matrix Spike Dup (B351009-MSD1)	**Source: 23H3258-16**			Prepared: 09/05/23 Analyzed: 09/08/23							
Aroclor-1016	3.6	0.48	mg/Kg	2.42	ND	**147**	*	40-140	27.6	50	MS-22
Aroclor-1016 [2C]	3.1	0.48	mg/Kg	2.42	ND	128		40-140	28.9	50	
Aroclor-1260	2.0	0.48	mg/Kg	2.42	ND	81.7		40-140	16.4	50	
Aroclor-1260 [2C]	2.2	0.48	mg/Kg	2.42	ND	92.6		40-140	35.4	50	
Surrogate: Decachlorobiphenyl	*5.67*		mg/Kg	9.69		58.5		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.01*		mg/Kg	9.69		62.0		30-150			
Surrogate: Tetrachloro-m-xylene	*5.92*		mg/Kg	9.69		61.1		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.47*		mg/Kg	9.69		77.1		30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-121-R30NC

Lab Sample ID: 23H3258-01 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	130	
	2	0.000	0.000	0.000	110	16.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-122-R30NB

Lab Sample ID: 23H3258-02 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	94	
	2	0.000	0.000	0.000	82	13.6

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-123-R30C

Lab Sample ID: 23H3258-03 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	30	
	2	0.000	0.000	0.000	31	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-124-R31W

Lab Sample ID: 23H3258-04

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	28	
	2	0.000	0.000	0.000	28	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-125-R31NC

Lab Sample ID: 23H3258-05

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	160	
	2	0.000	0.000	0.000	160	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-126-R33E

Lab Sample ID: 23H3258-06

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	300	
	2	0.000	0.000	0.000	280	6.9

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-127-R33NC

Lab Sample ID: 23H3258-07

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	310	
	2	0.000	0.000	0.000	310	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-128-R34C

Lab Sample ID: 23H3258-08

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	43	
	2	0.000	0.000	0.000	43	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-129-R35W

Lab Sample ID: 23H3258-09 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	180	
	2	0.000	0.000	0.000	180	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-130-R37E

Lab Sample ID: 23H3258-10 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	400	
	2	0.000	0.000	0.000	380	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-131-R37S

Lab Sample ID: 23H3258-11

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	270	
	2	0.000	0.000	0.000	270	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-132-R31NB

Lab Sample ID: 23H3258-12 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	250	
	2	0.000	0.000	0.000	240	4.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-133-R16EP

Lab Sample ID: 23H3258-13 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.7	
	2	0.000	0.000	0.000	5.5	15.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-134-R16EW

Lab Sample ID: 23H3258-14 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	21	10.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-135-R16WT

Lab Sample ID: 23H3258-15 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	33	
	2	0.000	0.000	0.000	32	3.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-136-GN

Lab Sample ID: 23H3258-16

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.4	
	2	0.000	0.000	0.000	6.1	12.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-137-GFN

Lab Sample ID: 23H3258-17

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.5	
	2	0.000	0.000	0.000	3.0	18.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-138-GFE

Lab Sample ID: 23H3258-18

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.5	
	2	0.000	0.000	0.000	3.6	2.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-139-GFS

Lab Sample ID: 23H3258-19 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.1	
	2	0.000	0.000	0.000	6.9	2.9

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-140-GFW

Lab Sample ID: 23H3258-20 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.0	
	2	0.000	0.000	0.000	4.1	2.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351009-BS1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.4	6.9
Aroclor-1260	1	0.000	0.000	0.000	1.2	
	2	0.000	0.000	0.000	1.3	8.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351009-BSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.2	
	2	0.000	0.000	0.000	1.3	8.0
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	1.1	9.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351009-MS1

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.7	
	2	0.000	0.000	0.000	2.3	16.0
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.6	6.1

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351009-MSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	3.6	
	2	0.000	0.000	0.000	3.1	14.9
Aroclor-1260	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	2.2	9.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23H3258 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-121-R30NC	8/15/2023	8:31	GRAB	O	U		1				x
2	P-122-R30NB	8/15/2023	8:32	GRAB	O	U		1				x
3	P-123-R30C	8/15/2023	8:33	GRAB	O	U		1				x
4	P-124-R31W	8/15/2023	8:34	GRAB	O	U		1				x
5	P-125-R31NC	8/15/2023	8:35	GRAB	O	U		1				x
6	P-126-R33E	8/15/2023	8:36	GRAB	O	U		1				x
7	P-127-R33NC	8/15/2023	8:37	GRAB	O	U		1				x
8	P-128-R34C	8/15/2023	8:38	GRAB	O	U		1				x
9	P-129-R35W	8/15/2023	8:39	GRAB	O	U		1				x
10	P-130-R37E	8/15/2023	8:40	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 1355	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1355	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3258 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	5t Johnsbury Armory
Project Location:	5t Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-131-R37S	8/15/2023	8:41	GRAB	O	U		1				x
12	P-132-R31NB	8/15/2023	10:00	GRAB	O	U		1				x
13	P-133-R16EP	8/15/2023	12:59	GRAB	O	U		1				x
14	P-134-R16EW	8/15/2023	13:00	GRAB	O	U		1				x
15	P-135-R16WT	8/15/2023	13:01	GRAB	O	U		1				x
16	P-136-GN	8/15/2023	13:15	GRAB	O	U		3				x
17	P-137-GFN	8/15/2023	13:16	GRAB	O	U		1				x
18	P-138-GFE	8/15/2023	13:17	GRAB	O	U		1				x
19	P-139-GFS	8/15/2023	13:18	GRAB	O	U		1				x
20	P-140-GFW	8/15/2023	13:19	GRAB	O	U		1				x

[3] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1256
Received by: (signature)	Date/Time: 8/22/23 1256
Relinquished by: (signature)	Date/Time: 8-22-23 1746
Received by: (signature) 38, 22, 39	Date/Time: 8/23/23
Relinquished by: (signature) 26, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Quaitrax ID: 120836

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics												VOA Vials					Other / Fill in				
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	Unpreserved	1 Liter	HCL	Sulfuric	Sulfuric	250mL	Phosphoric	HCl	100mL	Unpreserved	1 Liter	Unpreserved	Sulfuric	500mL	Unpreserved	Sulfuric	250mL	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
1			1																																				
2			1																																				
3			1																																				
4			1																																				
5			1																																				
6			1																																				
7			1																																				
8			1																																				
9			1																																				
10			1																																				
11			1																																				
12			1																																				
13			1																																				
14			1																																				
15			1																																				
16			3																																				
17			1																																				
18			1																																				
19			1																																				
20			1																																				

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 11, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3259

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3259-01 6

23H3259-02 7

23H3259-03 8

23H3259-04 9

23H3259-05 10

23H3259-06 11

23H3259-07 12

23H3259-08 13

23H3259-09 14

23H3259-10 15

23H3259-11 16

23H3259-12 17

23H3259-13 18

23H3259-14 19

23H3259-15 20

23H3259-16 21

23H3259-17 22

23H3259-18 23

23H3259-19 24

23H3259-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351010 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/11/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3259

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-141-GFC	23H3259-01	Product/Solid		SW-846 8082A	
P-142-GFDG	23H3259-02	Product/Solid		SW-846 8082A	
P-143-GFLG	23H3259-03	Product/Solid		SW-846 8082A	
P-144-GFW	23H3259-04	Product/Solid		SW-846 8082A	
P-145-EWP1	23H3259-05	Product/Solid		SW-846 8082A	
P-146-EWP2	23H3259-06	Product/Solid		SW-846 8082A	
P-147-EWP3	23H3259-07	Product/Solid		SW-846 8082A	
P-148-EPB1	23H3259-08	Product/Solid		SW-846 8082A	
P-149-EPB2	23H3259-09	Product/Solid		SW-846 8082A	
P-150-EPB3	23H3259-10	Product/Solid		SW-846 8082A	
P-151-EP1	23H3259-11	Product/Solid		SW-846 8082A	
P-152-EP2	23H3259-12	Product/Solid		SW-846 8082A	
P-153-EP3	23H3259-13	Product/Solid		SW-846 8082A	
P-154-R14F	23H3259-14	Product/Solid		SW-846 8082A	
P-155-S12F	23H3259-15	Product/Solid		SW-846 8082A	
P-156-R10WT	23H3259-16	Product/Solid		SW-846 8082A	
P-157-R11F	23H3259-17	Product/Solid		SW-846 8082A	
P-158-R11EDW	23H3259-18	Product/Solid		SW-846 8082A	
P-159-R14WT	23H3259-19	Product/Solid		SW-846 8082A	
P-160-R14CWP	23H3259-20	Product/Solid		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

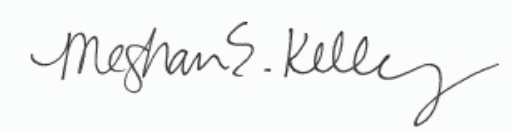
Decachlorobiphenyl
23H3259-15[P-155-S12F], 23H3259-16[P-156-R10WT], 23H3259-19[P-159-R14WT]

Decachlorobiphenyl [2C]
23H3259-15[P-155-S12F], 23H3259-16[P-156-R10WT], 23H3259-19[P-159-R14WT]

Tetrachloro-m-xylene
23H3259-15[P-155-S12F], 23H3259-16[P-156-R10WT], 23H3259-19[P-159-R14WT]

Tetrachloro-m-xylene [2C]
23H3259-15[P-155-S12F], 23H3259-16[P-156-R10WT], 23H3259-19[P-159-R14WT]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-141-GFC | Sampled: 8/15/2023 13:20

Sample ID: 23H3259-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1221 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1232 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1242 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1248 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1254 [2]	7.9	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1260 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1262 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM
Aroclor-1268 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:22	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/9/23 9:22
Decachlorobiphenyl [2]	98.5	30-150		9/9/23 9:22
Tetrachloro-m-xylene [1]	96.4	30-150		9/9/23 9:22
Tetrachloro-m-xylene [2]	99.2	30-150		9/9/23 9:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-142-GFDG | Sampled: 8/15/2023 13:21

Sample ID: 23H3259-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1221 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1232 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1242 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1248 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1254 [2]	3.7	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1260 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1262 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM
Aroclor-1268 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 9:39	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.0	30-150		9/9/23 9:39
Decachlorobiphenyl [2]	97.2	30-150		9/9/23 9:39
Tetrachloro-m-xylene [1]	96.2	30-150		9/9/23 9:39
Tetrachloro-m-xylene [2]	95.8	30-150		9/9/23 9:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-143-GFLG | Sampled: 8/15/2023 13:22

Sample ID: 23H3259-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1221 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1232 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1242 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1248 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1254 [2]	13	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1260 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1262 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM
Aroclor-1268 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 9:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	107	30-150		9/9/23 9:56
Decachlorobiphenyl [2]	107	30-150		9/9/23 9:56
Tetrachloro-m-xylene [1]	103	30-150		9/9/23 9:56
Tetrachloro-m-xylene [2]	101	30-150		9/9/23 9:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-144-GFW | Sampled: 8/15/2023 13:23

Sample ID: 23H3259-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1254 [2]	1.4	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 17:23	JEA

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	57.1	30-150		9/8/23 17:23
Decachlorobiphenyl [2]	56.4	30-150		9/8/23 17:23
Tetrachloro-m-xylene [1]	52.0	30-150		9/8/23 17:23
Tetrachloro-m-xylene [2]	53.8	30-150		9/8/23 17:23

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-145-EWP1 | Sampled: 8/15/2023 13:45

Sample ID: 23H3259-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1221 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1232 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1242 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1248 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1254 [2]	3.4	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1260 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1262 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM
Aroclor-1268 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:13	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	68.4	30-150		9/9/23 10:13
Decachlorobiphenyl [2]	66.9	30-150		9/9/23 10:13
Tetrachloro-m-xylene [1]	56.2	30-150		9/9/23 10:13
Tetrachloro-m-xylene [2]	55.0	30-150		9/9/23 10:13

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-146-EWP2 | Sampled: 8/15/2023 13:46

Sample ID: 23H3259-06

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1221 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1232 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1242 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1248 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1254 [2]	5.8	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1260 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1262 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM
Aroclor-1268 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:30	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.2	30-150		9/9/23 10:30
Decachlorobiphenyl [2]	95.5	30-150		9/9/23 10:30
Tetrachloro-m-xylene [1]	84.6	30-150		9/9/23 10:30
Tetrachloro-m-xylene [2]	83.2	30-150		9/9/23 10:30

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-147-EWP3 | Sampled: 8/15/2023 13:47

Sample ID: 23H3259-07

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1221 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1232 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1242 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1248 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1254 [2]	5.6	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1260 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1262 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM
Aroclor-1268 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 10:47	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	105	30-150		9/9/23 10:47
Decachlorobiphenyl [2]	103	30-150		9/9/23 10:47
Tetrachloro-m-xylene [1]	91.3	30-150		9/9/23 10:47
Tetrachloro-m-xylene [2]	89.8	30-150		9/9/23 10:47

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-148-EPB1 | Sampled: 8/15/2023 13:48

Sample ID: 23H3259-08

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1221 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1232 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1242 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1248 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1254 [1]	9.3	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1260 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1262 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM
Aroclor-1268 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:04	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.5	30-150		9/9/23 11:04
Decachlorobiphenyl [2]	99.6	30-150		9/9/23 11:04
Tetrachloro-m-xylene [1]	85.8	30-150		9/9/23 11:04
Tetrachloro-m-xylene [2]	85.2	30-150		9/9/23 11:04

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-149-EPB2 | Sampled: 8/15/2023 13:49

Sample ID: 23H3259-09

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1221 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1232 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1242 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1248 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1254 [1]	4.7	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1260 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1262 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM
Aroclor-1268 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/5/23	9/9/23 11:21	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.2	30-150		9/9/23 11:21
Decachlorobiphenyl [2]	82.8	30-150		9/9/23 11:21
Tetrachloro-m-xylene [1]	77.8	30-150		9/9/23 11:21
Tetrachloro-m-xylene [2]	76.7	30-150		9/9/23 11:21

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-150-EPB3 | Sampled: 8/15/2023 13:50

Sample ID: 23H3259-10

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1221 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1232 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1242 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1248 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1254 [1]	19	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1260 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1262 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM
Aroclor-1268 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:38	SFM

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	149		30-150		9/9/23 11:38
Decachlorobiphenyl [2]	**154**	*	30-150		9/9/23 11:38
Tetrachloro-m-xylene [1]	140		30-150		9/9/23 11:38
Tetrachloro-m-xylene [2]	138		30-150		9/9/23 11:38

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-151-EP1 | Sampled: 8/15/2023 13:51

Sample ID: 23H3259-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1221 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1232 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1242 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1248 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1254 [2]	0.55	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1260 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1262 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM
Aroclor-1268 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:25	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.8	30-150		9/8/23 20:25
Decachlorobiphenyl [2]	93.2	30-150		9/8/23 20:25
Tetrachloro-m-xylene [1]	83.1	30-150		9/8/23 20:25
Tetrachloro-m-xylene [2]	85.2	30-150		9/8/23 20:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-152-EP2 | Sampled: 8/15/2023 13:52

Sample ID: 23H3259-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1254 [1]	0.62	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:42	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.5	30-150		9/8/23 20:42
Decachlorobiphenyl [2]	88.0	30-150		9/8/23 20:42
Tetrachloro-m-xylene [1]	68.2	30-150		9/8/23 20:42
Tetrachloro-m-xylene [2]	69.6	30-150		9/8/23 20:42

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-153-EP3 | Sampled: 8/15/2023 13:53

Sample ID: 23H3259-13

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1254 [1]	1.2	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/5/23	9/8/23 20:59	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.1	30-150		9/8/23 20:59
Decachlorobiphenyl [2]	79.4	30-150		9/8/23 20:59
Tetrachloro-m-xylene [1]	61.4	30-150		9/8/23 20:59
Tetrachloro-m-xylene [2]	64.3	30-150		9/8/23 20:59

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-154-R14F | Sampled: 8/15/2023 08:00

Sample ID: 23H3259-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1221 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1232 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1242 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1248 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1254 [1]	12	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1260 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1262 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM
Aroclor-1268 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 11:55	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.3	30-150		9/9/23 11:55
Decachlorobiphenyl [2]	86.1	30-150		9/9/23 11:55
Tetrachloro-m-xylene [1]	99.3	30-150		9/9/23 11:55
Tetrachloro-m-xylene [2]	97.4	30-150		9/9/23 11:55

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-155-S12F | Sampled: 8/16/2023 08:01

Sample ID: 23H3259-15

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1221 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1232 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1242 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1248 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1254 [1]	65	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1260 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1262 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM
Aroclor-1268 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:37	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/9/23 16:37
Decachlorobiphenyl [2]	*	30-150	S-01	9/9/23 16:37
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/9/23 16:37
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/9/23 16:37

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-156-R10WT | Sampled: 8/16/2023 08:02

Sample ID: 23H3259-16

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1221 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1232 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1242 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1248 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1254 [1]	38	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1260 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1262 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM
Aroclor-1268 [1]	ND	9.9	mg/Kg	100		SW-846 8082A	9/5/23	9/9/23 16:54	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/9/23 16:54
Decachlorobiphenyl [2]	*	30-150	S-01	9/9/23 16:54
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/9/23 16:54
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/9/23 16:54

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-157-R11F | Sampled: 8/16/2023 08:03

Sample ID: 23H3259-17

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1221 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1232 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1242 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1248 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1254 [1]	11	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1260 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1262 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM
Aroclor-1268 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 12:46	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.0	30-150		9/9/23 12:46
Decachlorobiphenyl [2]	86.5	30-150		9/9/23 12:46
Tetrachloro-m-xylene [1]	98.2	30-150		9/9/23 12:46
Tetrachloro-m-xylene [2]	93.1	30-150		9/9/23 12:46

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-158-R11EDW | Sampled: 8/16/2023 08:04

Sample ID: 23H3259-18

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1221 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1232 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1242 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1248 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1254 [2]	2.7	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1260 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1262 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM
Aroclor-1268 [1]	ND	0.50	mg/Kg	5		SW-846 8082A	9/5/23	9/9/23 13:03	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.8	30-150		9/9/23 13:03
Decachlorobiphenyl [2]	70.7	30-150		9/9/23 13:03
Tetrachloro-m-xylene [1]	71.7	30-150		9/9/23 13:03
Tetrachloro-m-xylene [2]	70.3	30-150		9/9/23 13:03

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-159-R14WT | Sampled: 8/16/2023 08:05

Sample ID: 23H3259-19

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1221 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1232 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1242 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1248 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1254 [1]	20	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1260 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1262 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM
Aroclor-1268 [1]	ND	4.9	mg/Kg	50		SW-846 8082A	9/5/23	9/9/23 13:20	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/9/23 13:20
Decachlorobiphenyl [2]	*	30-150	S-01	9/9/23 13:20
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/9/23 13:20
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/9/23 13:20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3259

Date Received: 8/22/2023

Field Sample #: P-160-R14CWP | Sampled: 8/16/2023 08:06

Sample ID: 23H3259-20

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1221 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1232 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1242 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1248 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1254 [1]	8.3	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1260 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1262 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM
Aroclor-1268 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	9/5/23	9/9/23 13:37	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.0	30-150		9/9/23 13:37
Decachlorobiphenyl [2]	90.4	30-150		9/9/23 13:37
Tetrachloro-m-xylene [1]	87.4	30-150		9/9/23 13:37
Tetrachloro-m-xylene [2]	85.2	30-150		9/9/23 13:37

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3259-01 [P-141-GFC]	B351010	2.01	10.0	09/05/23
23H3259-02 [P-142-GFDG]	B351010	2.04	10.0	09/05/23
23H3259-03 [P-143-GFLG]	B351010	2.05	10.0	09/05/23
23H3259-04 [P-144-GFW]	B351010	2.00	10.0	09/05/23
23H3259-05 [P-145-EWP1]	B351010	2.02	10.0	09/05/23
23H3259-06 [P-146-EWP2]	B351010	1.98	10.0	09/05/23
23H3259-07 [P-147-EWP3]	B351010	2.01	10.0	09/05/23
23H3259-08 [P-148-EPB1]	B351010	2.03	10.0	09/05/23
23H3259-09 [P-149-EPB2]	B351010	2.01	10.0	09/05/23
23H3259-10 [P-150-EPB3]	B351010	2.02	10.0	09/05/23
23H3259-11 [P-151-EP1]	B351010	2.02	10.0	09/05/23
23H3259-12 [P-152-EP2]	B351010	2.01	10.0	09/05/23
23H3259-13 [P-153-EP3]	B351010	2.01	10.0	09/05/23
23H3259-14 [P-154-R14F]	B351010	2.00	10.0	09/05/23
23H3259-15 [P-155-S12F]	B351010	2.03	10.0	09/05/23
23H3259-16 [P-156-R10WT]	B351010	2.02	10.0	09/05/23
23H3259-17 [P-157-R11F]	B351010	2.01	10.0	09/05/23
23H3259-18 [P-158-R11EDW]	B351010	2.02	10.0	09/05/23
23H3259-19 [P-159-R14WT]	B351010	2.04	10.0	09/05/23
23H3259-20 [P-160-R14CWP]	B351010	2.04	10.0	09/05/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351010 - SW-846 3540C										
Blank (B351010-BLK1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.937*		mg/Kg	1.00		93.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.926*		mg/Kg	1.00		92.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.860*		mg/Kg	1.00		86.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.872*		mg/Kg	1.00		87.2	30-150			
LCS (B351010-BS1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	0.64	0.10	mg/Kg	0.995		64.0	40-140			
Aroclor-1016 [2C]	0.67	0.10	mg/Kg	0.995		67.7	40-140			
Aroclor-1260	0.62	0.10	mg/Kg	0.995		62.7	40-140			
Aroclor-1260 [2C]	0.64	0.10	mg/Kg	0.995		64.3	40-140			
Surrogate: Decachlorobiphenyl	*0.837*		mg/Kg	0.995		84.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.828*		mg/Kg	0.995		83.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.761*		mg/Kg	0.995		76.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.771*		mg/Kg	0.995		77.5	30-150			
LCS Dup (B351010-BSD1)				Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	0.62	0.10	mg/Kg	0.995		62.2	40-140	2.90	30	
Aroclor-1016 [2C]	0.66	0.10	mg/Kg	0.995		66.1	40-140	2.36	30	
Aroclor-1260	0.60	0.10	mg/Kg	0.995		60.6	40-140	3.44	30	
Aroclor-1260 [2C]	0.62	0.10	mg/Kg	0.995		62.4	40-140	3.02	30	
Surrogate: Decachlorobiphenyl	*0.824*		mg/Kg	0.995		82.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.817*		mg/Kg	0.995		82.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.738*		mg/Kg	0.995		74.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.752*		mg/Kg	0.995		75.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351010 - SW-846 3540C										
Matrix Spike (B351010-MS1)		**Source: 23H3259-11**		Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	0.60	0.10	mg/Kg	1.01	ND	59.2	40-140			
Aroclor-1016 [2C]	0.66	0.10	mg/Kg	1.01	ND	65.0	40-140			
Aroclor-1260	0.68	0.10	mg/Kg	1.01	ND	67.2	40-140			
Aroclor-1260 [2C]	0.69	0.10	mg/Kg	1.01	ND	68.6	40-140			
Surrogate: Decachlorobiphenyl	*0.711*		mg/Kg	1.01		70.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.714*		mg/Kg	1.01		70.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.695*		mg/Kg	1.01		68.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.715*		mg/Kg	1.01		70.8	30-150			
Matrix Spike Dup (B351010-MSD1)		**Source: 23H3259-11**		Prepared: 09/05/23 Analyzed: 09/08/23						
Aroclor-1016	0.75	0.099	mg/Kg	0.990	ND	75.9	40-140	22.7	50	
Aroclor-1016 [2C]	0.83	0.099	mg/Kg	0.990	ND	84.0	40-140	23.6	50	
Aroclor-1260	0.84	0.099	mg/Kg	0.990	ND	85.3	40-140	21.8	50	
Aroclor-1260 [2C]	0.87	0.099	mg/Kg	0.990	ND	87.9	40-140	22.7	50	
Surrogate: Decachlorobiphenyl	*0.921*		mg/Kg	0.990		93.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.925*		mg/Kg	0.990		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.879*		mg/Kg	0.990		88.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.901*		mg/Kg	0.990		91.0	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-141-GFC

Lab Sample ID: 23H3259-01

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.9	
	2	0.000	0.000	0.000	7.9	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-142-GFDG

Lab Sample ID: 23H3259-02

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.7	
	2	0.000	0.000	0.000	3.7	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-143-GFLG

Lab Sample ID: 23H3259-03

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	13	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-144-GFW

Lab Sample ID: 23H3259-04

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.2	
	2	0.000	0.000	0.000	1.4	15.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-145-EWP1

Lab Sample ID: 23H3259-05 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.0	
	2	0.000	0.000	0.000	3.4	12.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-146-EWP2

Lab Sample ID: 23H3259-06 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.9	
	2	0.000	0.000	0.000	5.8	16.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-147-EWP3

Lab Sample ID: 23H3259-07 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.2	
	2	0.000	0.000	0.000	5.6	7.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-148-EPB1

Lab Sample ID: 23H3259-08 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	9.3	
	2	0.000	0.000	0.000	8.6	7.8

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-149-EPB2

Lab Sample ID: 23H3259-09

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.7	
	2	0.000	0.000	0.000	4.3	8.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-150-EPB3

Lab Sample ID: 23H3259-10 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	18	10.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-151-EP1

Lab Sample ID: 23H3259-11

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.51	
	2	0.000	0.000	0.000	0.55	7.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-152-EP2

Lab Sample ID: 23H3259-12

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.62	
	2	0.000	0.000	0.000	0.61	1.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-153-EP3

Lab Sample ID: 23H3259-13

Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.2	
	2	0.000	0.000	0.000	1.2	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-154-R14F

Lab Sample ID: 23H3259-14

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	11	8.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-155-S12F

Lab Sample ID: 23H3259-15 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	65	
	2	0.000	0.000	0.000	64	1.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-156-R10WT

Lab Sample ID: 23H3259-16 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	38	
	2	0.000	0.000	0.000	38	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-157-R11F

Lab Sample ID: 23H3259-17

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	9.4	15.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-158-R11EDW

Lab Sample ID: 23H3259-18

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.7	
	2	0.000	0.000	0.000	2.7	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-159-R14WT

Lab Sample ID: 23H3259-19 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	20	
	2	0.000	0.000	0.000	20	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-160-R14CWP

Lab Sample ID: 23H3259-20

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	8.3	
	2	0.000	0.000	0.000	7.8	6.2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351010-BS1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.64	
	2	0.000	0.000	0.000	0.67	4.6
Aroclor-1260	1	0.000	0.000	0.000	0.62	
	2	0.000	0.000	0.000	0.64	3.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351010-BSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.62	
	2	0.000	0.000	0.000	0.66	6.3
Aroclor-1260	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.62	3.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351010-MS1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.66	9.5
Aroclor-1260	1	0.000	0.000	0.000	0.68	
	2	0.000	0.000	0.000	0.69	1.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351010-MSD1 Date(s) Analyzed: 09/08/2023 09/08/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.75	
	2	0.000	0.000	0.000	0.83	10.1
Aroclor-1260	1	0.000	0.000	0.000	0.84	
	2	0.000	0.000	0.000	0.87	2.3

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23H3259 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-141-GFC	8/15/2023	13:20	GRAB	O	U		1				x
2	P-142-GFDG	8/15/2023	13:21	GRAB	O	U		1				x
3	P-143-GFLG	8/15/2023	13:22	GRAB	O	U		1				x
4	P-144-GFW	8/15/2023	13:23	GRAB	O	U		1				x
5	P-145-EWP1	8/15/2023	13:45	GRAB	O	U		1				x
6	P-146-EWP2	8/15/2023	13:46	GRAB	O	U		1				x
7	P-147-EWP3	8/15/2023	13:47	GRAB	O	U		1				x
8	P-148-EPB1	8/15/2023	13:48	GRAB	O	U		1				x
9	P-149-EPB2	8/15/2023	13:49	GRAB	O	U		1				x
10	P-150-EPB3	8/15/2023	13:50	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 1258 8-22-23
Received by: (signature)	Date/Time: 1258 8-22-23
Relinquished by: (signature)	Date/Time: 1746 8-22-23
Received by: (signature) 4.0 C VII 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3259 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-151-EP1	8/15/2023	13:51	GRAB	O	U		3				x
12	P-152-EP2	8/15/2023	13:52	GRAB	O	U		1				x
13	P-153-EP3	8/15/2023	13:53	GRAB	O	U		1				x
14	P-154-R14F	8/15/2023	8:00	GRAB	O	U		1				x
15	P-155-S12F	8/16/2023	8:01	GRAB	O	U		1				x
16	P-156-R10WT	8/16/2023	8:02	GRAB	O	U		1				x
17	P-157-R11F	8/16/2023	8:03	GRAB	O	U		1				x
18	P-158-R11EDW	8/16/2023	8:04	GRAB	O	U		1				x
19	P-159-R14WT	8/16/2023	8:05	GRAB	O	U		1				x
20	P-160-R14CWP	8/16/2023	8:06	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8-22-23 1250
Received by: (signature)	Date/Time: 8/22/23 1930
Relinquished by: (signature)	Date/Time: 8.22.23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)			Ambers						Plastics												VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			100mL	1 Liter		500mL		250mL																	
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
1			1																														
2			1																														
3			1																														
4			1																														
5			1																														
6			1																														
7			1																														
8			1																														
9			1																														
10			4																														
11			3																														
12			1																														
13			1																														
14			1																														
15			1																														
16			1																														
17			1																														
18			1																														
19			1																														
20			1																														

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 11, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3260

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3260-01 6

23H3260-02 7

23H3260-03 8

23H3260-04 9

23H3260-05 10

23H3260-06 11

23H3260-07 12

23H3260-08 13

23H3260-09 14

23H3260-10 15

23H3260-11 16

23H3260-12 17

23H3260-13 18

23H3260-14 19

23H3260-15 20

23H3260-16 21

23H3260-17 22

23H3260-18 23

23H3260-19 24

23H3260-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351180 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/11/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3260

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-161-R16SWP	23H3260-01	Product/Solid		SW-846 8082A	
P-162-R12SDW	23H3260-02	Product/Solid		SW-846 8082A	
P-163-R14WDW	23H3260-03	Product/Solid		SW-846 8082A	
P-164-R11WP	23H3260-04	Product/Solid		SW-846 8082A	
P-165-R16D	23H3260-05	Product/Solid		SW-846 8082A	
P-166-EX	23H3260-06	Product/Solid		SW-846 8082A	
P-167-EX	23H3260-07	Product/Solid		SW-846 8082A	
P-168-EX	23H3260-08	Product/Solid		SW-846 8082A	
P-169-EX	23H3260-09	Product/Solid		SW-846 8082A	
P-170-EX	23H3260-10	Product/Solid		SW-846 8082A	
P-171-EX	23H3260-11	Product/Solid		SW-846 8082A	
P-172-EX	23H3260-12	Product/Solid		SW-846 8082A	
P-173-EX	23H3260-13	Product/Solid		SW-846 8082A	
P-174-EX	23H3260-14	Product/Solid		SW-846 8082A	
P-175-EX	23H3260-15	Product/Solid		SW-846 8082A	
P-176-EX	23H3260-16	Product/Solid		SW-846 8082A	
P-177-EX	23H3260-17	Product/Solid		SW-846 8082A	
P-178-EX	23H3260-18	Product/Solid		SW-846 8082A	
P-179-EX	23H3260-19	Product/Solid		SW-846 8082A	
P-180-EX	23H3260-20	Product/Solid		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

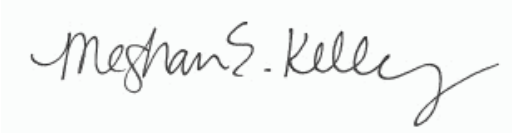
Decachlorobiphenyl
23H3260-01[P-161-R16SWP], 23H3260-04[P-164-R11WP], 23H3260-05[P-165-R16D], 23H3260-12[P-172-EX], 23H3260-13[P-173-EX], 23H3260-14[P-174-EX]

Decachlorobiphenyl [2C]
23H3260-01[P-161-R16SWP], 23H3260-04[P-164-R11WP], 23H3260-05[P-165-R16D], 23H3260-12[P-172-EX], 23H3260-13[P-173-EX], 23H3260-14[P-174-EX]

Tetrachloro-m-xylene
23H3260-01[P-161-R16SWP], 23H3260-04[P-164-R11WP], 23H3260-05[P-165-R16D], 23H3260-12[P-172-EX], 23H3260-13[P-173-EX], 23H3260-14[P-174-EX]

Tetrachloro-m-xylene [2C]
23H3260-01[P-161-R16SWP], 23H3260-04[P-164-R11WP], 23H3260-05[P-165-R16D], 23H3260-12[P-172-EX], 23H3260-13[P-173-EX], 23H3260-14[P-174-EX]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-161-R16SWP | Sampled: 8/16/2023 08:07

Sample ID: 23H3260-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1221 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1232 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1242 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1248 [2]	17	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1254 [2]	18	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1260 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1262 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG
Aroclor-1268 [1]	ND	5.0	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 10:36	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/10/23 10:36
Decachlorobiphenyl [2]	*	30-150	S-01	9/10/23 10:36
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/10/23 10:36
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/10/23 10:36

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-162-R12SDW | Sampled: 8/16/2023 08:08

Sample ID: 23H3260-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1221 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1232 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1242 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1248 [2]	3.6	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1254 [2]	3.3	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1260 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1262 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG
Aroclor-1268 [1]	ND	0.80	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 10:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.9	30-150		9/10/23 10:53
Decachlorobiphenyl [2]	84.2	30-150		9/10/23 10:53
Tetrachloro-m-xylene [1]	85.0	30-150		9/10/23 10:53
Tetrachloro-m-xylene [2]	81.5	30-150		9/10/23 10:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-163-R14WDW | Sampled: 8/16/2023 08:09

Sample ID: 23H3260-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1221 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1232 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1242 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1248 [1]	3.5	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1254 [2]	2.1	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1260 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1262 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG
Aroclor-1268 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 11:10	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.9	30-150		9/10/23 11:10
Decachlorobiphenyl [2]	96.4	30-150		9/10/23 11:10
Tetrachloro-m-xylene [1]	94.6	30-150		9/10/23 11:10
Tetrachloro-m-xylene [2]	91.8	30-150		9/10/23 11:10

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-164-R11WP | Sampled: 8/16/2023 08:10

Sample ID: 23H3260-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1221 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1232 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1242 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1248 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1254 [1]	20	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1260 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1262 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG
Aroclor-1268 [1]	ND	4.1	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:27	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/10/23 11:27
Decachlorobiphenyl [2]	*	30-150	S-01	9/10/23 11:27
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/10/23 11:27
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/10/23 11:27

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-165-R16D | Sampled: 8/16/2023 08:11

Sample ID: 23H3260-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1254 [1]	34	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	50		SW-846 8082A	9/6/23	9/10/23 11:44	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/10/23 11:44
Decachlorobiphenyl [2]	*	30-150	S-01	9/10/23 11:44
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/10/23 11:44
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/10/23 11:44

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-166-EX | Sampled: 8/16/2023 08:12

Sample ID: 23H3260-06

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1221 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1232 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1242 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1248 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1254 [2]	5.7	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1260 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1262 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG
Aroclor-1268 [1]	ND	0.95	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:02	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	112	30-150		9/10/23 12:02
Decachlorobiphenyl [2]	109	30-150		9/10/23 12:02
Tetrachloro-m-xylene [1]	94.0	30-150		9/10/23 12:02
Tetrachloro-m-xylene [2]	94.8	30-150		9/10/23 12:02

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-167-EX | Sampled: 8/16/2023 08:13

Sample ID: 23H3260-07

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1221 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1232 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1242 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1248 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1254 [1]	4.5	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1260 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1262 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG
Aroclor-1268 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 12:19	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	103	30-150		9/10/23 12:19
Decachlorobiphenyl [2]	98.7	30-150		9/10/23 12:19
Tetrachloro-m-xylene [1]	89.4	30-150		9/10/23 12:19
Tetrachloro-m-xylene [2]	87.9	30-150		9/10/23 12:19

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-168-EX | Sampled: 8/16/2023 08:14

Sample ID: 23H3260-08

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1221 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1232 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1242 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1248 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1254 [2]	1.0	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1260 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1262 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG
Aroclor-1268 [1]	ND	0.46	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:36	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.6	30-150		9/10/23 12:36
Decachlorobiphenyl [2]	92.8	30-150		9/10/23 12:36
Tetrachloro-m-xylene [1]	89.6	30-150		9/10/23 12:36
Tetrachloro-m-xylene [2]	88.8	30-150		9/10/23 12:36

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-169-EX | Sampled: 8/16/2023 08:15

Sample ID: 23H3260-09

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1221 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1232 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1242 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1248 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1254 [2]	1.8	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1260 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1262 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG
Aroclor-1268 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 12:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.9	30-150		9/10/23 12:53
Decachlorobiphenyl [2]	87.8	30-150		9/10/23 12:53
Tetrachloro-m-xylene [1]	87.0	30-150		9/10/23 12:53
Tetrachloro-m-xylene [2]	85.4	30-150		9/10/23 12:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-170-EX | Sampled: 8/16/2023 08:16

Sample ID: 23H3260-10

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1221 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1232 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1242 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1248 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1254 [2]	1.0	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1260 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1262 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG
Aroclor-1268 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 13:10	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.2	30-150		9/10/23 13:10
Decachlorobiphenyl [2]	85.3	30-150		9/10/23 13:10
Tetrachloro-m-xylene [1]	83.0	30-150		9/10/23 13:10
Tetrachloro-m-xylene [2]	82.2	30-150		9/10/23 13:10

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-171-EX | Sampled: 8/16/2023 08:17

Sample ID: 23H3260-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1221 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1232 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1242 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1248 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1254 [2]	1.7	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1260 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1262 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG
Aroclor-1268 [1]	ND	0.49	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 14:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.3	30-150		9/10/23 14:31
Decachlorobiphenyl [2]	82.5	30-150		9/10/23 14:31
Tetrachloro-m-xylene [1]	80.7	30-150		9/10/23 14:31
Tetrachloro-m-xylene [2]	80.2	30-150		9/10/23 14:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-172-EX | Sampled: 8/16/2023 08:18

Sample ID: 23H3260-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1221 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1232 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1242 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1248 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1254 [1]	9700	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1260 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1262 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG
Aroclor-1268 [1]	ND	900	mg/Kg	10000		SW-846 8082A	9/6/23	9/11/23 4:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/11/23 4:39
Decachlorobiphenyl [2]	*	30-150	S-01	9/11/23 4:39
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/11/23 4:39
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/11/23 4:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-173-EX | Sampled: 8/16/2023 08:19

Sample ID: 23H3260-13

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1221 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1232 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1242 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1248 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1254 [1]	7100	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1260 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1262 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG
Aroclor-1268 [1]	ND	1400	mg/Kg	20000		SW-846 8082A	9/6/23	9/11/23 4:56	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/11/23 4:56
Decachlorobiphenyl [2]	*	30-150	S-01	9/11/23 4:56
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/11/23 4:56
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/11/23 4:56

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-174-EX | Sampled: 8/16/2023 08:20

Sample ID: 23H3260-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1221 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1232 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1242 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1248 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1254 [1]	20000	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1260 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1262 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG
Aroclor-1268 [1]	ND	3400	mg/Kg	40000		SW-846 8082A	9/6/23	9/11/23 5:14	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/11/23 5:14
Decachlorobiphenyl [2]	*	30-150	S-01	9/11/23 5:14
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/11/23 5:14
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/11/23 5:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-175-EX | Sampled: 8/16/2023 08:21

Sample ID: 23H3260-15

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1221 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1232 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1242 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1248 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1254 [2]	1.8	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1260 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1262 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG
Aroclor-1268 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.5	30-150		9/10/23 15:39
Decachlorobiphenyl [2]	83.2	30-150		9/10/23 15:39
Tetrachloro-m-xylene [1]	79.0	30-150		9/10/23 15:39
Tetrachloro-m-xylene [2]	78.5	30-150		9/10/23 15:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-176-EX | Sampled: 8/16/2023 08:22

Sample ID: 23H3260-16

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1221 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1232 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1242 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1248 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1254 [1]	0.62	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1260 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1262 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG
Aroclor-1268 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 15:57	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	100	30-150		9/10/23 15:57
Decachlorobiphenyl [2]	94.5	30-150		9/10/23 15:57
Tetrachloro-m-xylene [1]	89.5	30-150		9/10/23 15:57
Tetrachloro-m-xylene [2]	89.1	30-150		9/10/23 15:57

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-177-EX | Sampled: 8/16/2023 08:23

Sample ID: 23H3260-17

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1221 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1232 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1242 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1248 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1254 [1]	0.72	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1260 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1262 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG
Aroclor-1268 [1]	ND	0.47	mg/Kg	5		SW-846 8082A	9/6/23	9/10/23 16:14	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.4	30-150		9/10/23 16:14
Decachlorobiphenyl [2]	85.3	30-150		9/10/23 16:14
Tetrachloro-m-xylene [1]	82.4	30-150		9/10/23 16:14
Tetrachloro-m-xylene [2]	82.2	30-150		9/10/23 16:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-178-EX | Sampled: 8/16/2023 08:24

Sample ID: 23H3260-18

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1221 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1232 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1242 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1248 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1254 [2]	2.4	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1260 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1262 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG
Aroclor-1268 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	107	30-150		9/10/23 16:31
Decachlorobiphenyl [2]	100	30-150		9/10/23 16:31
Tetrachloro-m-xylene [1]	103	30-150		9/10/23 16:31
Tetrachloro-m-xylene [2]	99.0	30-150		9/10/23 16:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-179-EX | Sampled: 8/16/2023 08:25

Sample ID: 23H3260-19

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1221 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1232 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1242 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1248 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1254 [2]	1.8	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1260 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1262 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG
Aroclor-1268 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 16:48	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	111	30-150		9/10/23 16:48
Decachlorobiphenyl [2]	103	30-150		9/10/23 16:48
Tetrachloro-m-xylene [1]	110	30-150		9/10/23 16:48
Tetrachloro-m-xylene [2]	104	30-150		9/10/23 16:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3260

Date Received: 8/22/2023

Field Sample #: P-180-EX | Sampled: 8/16/2023 08:26

Sample ID: 23H3260-20

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1221 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1232 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1242 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1248 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1254 [2]	3.0	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1260 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1262 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG
Aroclor-1268 [1]	ND	0.92	mg/Kg	10		SW-846 8082A	9/6/23	9/10/23 17:05	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	103	30-150		9/10/23 17:05
Decachlorobiphenyl [2]	95.6	30-150		9/10/23 17:05
Tetrachloro-m-xylene [1]	94.8	30-150		9/10/23 17:05
Tetrachloro-m-xylene [2]	93.2	30-150		9/10/23 17:05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3260-01 [P-161-R16SWP]	B351180	2.01	10.0	09/06/23
23H3260-02 [P-162-R12SDW]	B351180	2.51	10.0	09/06/23
23H3260-03 [P-163-R14WDW]	B351180	2.24	10.0	09/06/23
23H3260-04 [P-164-R11WP]	B351180	2.43	10.0	09/06/23
23H3260-05 [P-165-R16D]	B351180	2.27	10.0	09/06/23
23H3260-06 [P-166-EX]	B351180	2.11	10.0	09/06/23
23H3260-07 [P-167-EX]	B351180	2.08	10.0	09/06/23
23H3260-08 [P-168-EX]	B351180	2.19	10.0	09/06/23
23H3260-09 [P-169-EX]	B351180	2.13	10.0	09/06/23
23H3260-10 [P-170-EX]	B351180	2.07	10.0	09/06/23
23H3260-11 [P-171-EX]	B351180	2.06	10.0	09/06/23
23H3260-12 [P-172-EX]	B351180	2.22	10.0	09/06/23
23H3260-13 [P-173-EX]	B351180	2.81	10.0	09/06/23
23H3260-14 [P-174-EX]	B351180	2.35	10.0	09/06/23
23H3260-15 [P-175-EX]	B351180	2.32	10.0	09/06/23
23H3260-16 [P-176-EX]	B351180	2.11	10.0	09/06/23
23H3260-17 [P-177-EX]	B351180	2.13	10.0	09/06/23
23H3260-18 [P-178-EX]	B351180	2.14	10.0	09/06/23
23H3260-19 [P-179-EX]	B351180	2.06	10.0	09/06/23
23H3260-20 [P-180-EX]	B351180	2.18	10.0	09/06/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351180 - SW-846 3540C										
Blank (B351180-BLK1)				Prepared: 09/06/23 Analyzed: 09/10/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.919*		mg/Kg	1.00		91.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.890*		mg/Kg	1.00		89.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.788*		mg/Kg	1.00		78.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.811*		mg/Kg	1.00		81.1	30-150			
LCS (B351180-BS1)				Prepared: 09/06/23 Analyzed: 09/10/23						
Aroclor-1016	0.71	0.10	mg/Kg	1.00		71.3	40-140			
Aroclor-1016 [2C]	0.76	0.10	mg/Kg	1.00		76.0	40-140			
Aroclor-1260	0.74	0.10	mg/Kg	1.00		73.9	40-140			
Aroclor-1260 [2C]	0.73	0.10	mg/Kg	1.00		72.9	40-140			
Surrogate: Decachlorobiphenyl	*0.894*		mg/Kg	1.00		89.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.897*		mg/Kg	1.00		89.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.793*		mg/Kg	1.00		79.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.824*		mg/Kg	1.00		82.4	30-150			
LCS Dup (B351180-BSD1)				Prepared: 09/06/23 Analyzed: 09/10/23						
Aroclor-1016	0.56	0.10	mg/Kg	1.00		55.7	40-140	24.5	30	
Aroclor-1016 [2C]	0.60	0.10	mg/Kg	1.00		60.0	40-140	23.4	30	
Aroclor-1260	0.79	0.10	mg/Kg	1.00		78.9	40-140	6.53	30	
Aroclor-1260 [2C]	0.81	0.10	mg/Kg	1.00		81.1	40-140	10.7	30	
Surrogate: Decachlorobiphenyl	*0.786*		mg/Kg	1.00		78.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.782*		mg/Kg	1.00		78.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.431*		mg/Kg	1.00		43.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.439*		mg/Kg	1.00		43.9	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351180 - SW-846 3540C										
Matrix Spike (B351180-MS1)	**Source: 23H3260-17**			Prepared: 09/06/23 Analyzed: 09/10/23						
Aroclor-1016	0.79	0.49	mg/Kg	0.985	ND	80.5	40-140			
Aroclor-1016 [2C]	0.79	0.49	mg/Kg	0.985	ND	80.5	40-140			
Aroclor-1260	0.97	0.49	mg/Kg	0.985	ND	98.2	40-140			
Aroclor-1260 [2C]	0.87	0.49	mg/Kg	0.985	ND	88.7	40-140			
Surrogate: Decachlorobiphenyl	*0.890*		mg/Kg	0.985		90.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.838*		mg/Kg	0.985		85.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.806*		mg/Kg	0.985		81.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.802*		mg/Kg	0.985		81.4	30-150			
Matrix Spike Dup (B351180-MSD1)	**Source: 23H3260-17**			Prepared: 09/06/23 Analyzed: 09/10/23						
Aroclor-1016	0.58	0.38	mg/Kg	0.752	ND	77.7	40-140	30.3	50	
Aroclor-1016 [2C]	0.56	0.38	mg/Kg	0.752	ND	74.0	40-140	35.0	50	
Aroclor-1260	0.69	0.38	mg/Kg	0.752	ND	91.2	40-140	34.2	50	
Aroclor-1260 [2C]	0.67	0.38	mg/Kg	0.752	ND	88.7	40-140	26.9	50	
Surrogate: Decachlorobiphenyl	*0.669*		mg/Kg	0.752		89.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.629*		mg/Kg	0.752		83.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.621*		mg/Kg	0.752		82.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.611*		mg/Kg	0.752		81.2	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-161-R16SWP

Lab Sample ID: 23H3260-01 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	17	12.5
Aroclor-1254	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	18	18.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-162-R12SDW

Lab Sample ID: 23H3260-02 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	3.2	
	2	0.000	0.000	0.000	3.6	11.8
Aroclor-1254	1	0.000	0.000	0.000	2.7	
	2	0.000	0.000	0.000	3.3	16.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-163-R14WDW

Lab Sample ID: 23H3260-03 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	3.5	
	2	0.000	0.000	0.000	2.9	18.8
Aroclor-1254	1	0.000	0.000	0.000	1.8	
	2	0.000	0.000	0.000	2.1	15.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-164-R11WP

Lab Sample ID: 23H3260-04 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	20	
	2	0.000	0.000	0.000	20	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-165-R16D

Lab Sample ID: 23H3260-05

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	34	
	2	0.000	0.000	0.000	30	12.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-166-EX

Lab Sample ID: 23H3260-06 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.6	
	2	0.000	0.000	0.000	5.7	1.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-167-EX

Lab Sample ID: 23H3260-07

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.5	
	2	0.000	0.000	0.000	4.0	11.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-168-EX

Lab Sample ID: 23H3260-08

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.96	
	2	0.000	0.000	0.000	1.0	3.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-169-EX

Lab Sample ID: 23H3260-09

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.8	11.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-170-EX

Lab Sample ID: 23H3260-10 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.98	
	2	0.000	0.000	0.000	1.0	2.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-171-EX

Lab Sample ID: 23H3260-11

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.7	19.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-172-EX

Lab Sample ID: 23H3260-12

Date(s) Analyzed: 09/11/2023 09/11/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	9700	
	2	0.000	0.000	0.000	9500	2.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-173-EX

Lab Sample ID: 23H3260-13

Date(s) Analyzed: 09/11/2023 09/11/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7100	
	2	0.000	0.000	0.000	6800	4.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-174-EX

Lab Sample ID: 23H3260-14 Date(s) Analyzed: 09/11/2023 09/11/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	20000	
	2	0.000	0.000	0.000	20000	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-175-EX

Lab Sample ID: 23H3260-15

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.8	11.8

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-176-EX

Lab Sample ID: 23H3260-16 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.62	
	2	0.000	0.000	0.000	0.57	8.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-177-EX

Lab Sample ID: 23H3260-17

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.72	
	2	0.000	0.000	0.000	0.66	8.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-178-EX

Lab Sample ID: 23H3260-18

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.3	
	2	0.000	0.000	0.000	2.4	4.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-179-EX

Lab Sample ID: 23H3260-19

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.8	
	2	0.000	0.000	0.000	1.8	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-180-EX

Lab Sample ID: 23H3260-20 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.0	
	2	0.000	0.000	0.000	3.0	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351180-BS1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.71	
	2	0.000	0.000	0.000	0.76	6.8
Aroclor-1260	1	0.000	0.000	0.000	0.74	
	2	0.000	0.000	0.000	0.73	1.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351180-BSD1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.56	
	2	0.000	0.000	0.000	0.60	6.9
Aroclor-1260	1	0.000	0.000	0.000	0.79	
	2	0.000	0.000	0.000	0.81	2.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351180-MS1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.79	
	2	0.000	0.000	0.000	0.79	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.97	
	2	0.000	0.000	0.000	0.87	10.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351180-MSD1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.58	
	2	0.000	0.000	0.000	0.56	5.2
Aroclor-1260	1	0.000	0.000	0.000	0.69	
	2	0.000	0.000	0.000	0.67	2.9

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23H3260

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-161-R16SWP	8/16/2023	8:07	GRAB	O	U		1				x
2	P-162-R12SDW	8/16/2023	8:08	GRAB	O	U		1				x
3	P-163-R14WDW	8/16/2023	8:09	GRAB	O	U		1				x
4	P-164-R11WP	8/16/2023	8:10	GRAB	O	U		1				x
5	P-165-R16D	8/16/2023	8:11	GRAB	O	U		1				x
6	P-166-Ex	8/16/2023	8:12	GRAB	O	U		1				x
7	P-167-Ex	8/16/2023	8:13	GRAB	O	U		1				x
8	P-168-Ex	8/16/2023	8:14	GRAB	O	U		1				x
9	P-169-Ex	8/16/2023	8:15	GRAB	O	U		1				x
10	P-170-Ex	8/16/2023	8:16	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8-22-23 1258
Received by: (signature)	Date/Time: 8-22-23 1258
Relinquished by: (signature)	Date/Time: 8-22-23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1742
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3260

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-171-Ex	8/16/2023	8:17	GRAB	O	U		1				x
12	P-172-Ex	8/16/2023	8:18	GRAB	O	U		1				x
13	P-173-Ex	8/16/2023	8:19	GRAB	O	U		1				x
14	P-174-Ex	8/16/2023	8:20	GRAB	O	U		1				x
15	P-175-Ex	8/16/2023	8:21	GRAB	O	U		1				x
16	P-176-Ex	8/16/2023	8:22	GRAB	O	U		1				x
17	P-177-Ex	8/16/2023	8:23	GRAB	O	U		3				x
18	P-178-Ex	8/16/2023	8:24	GRAB	O	U		1				x
19	P-179-Ex	8/16/2023	8:25	GRAB	O	U		1				x
20	P-180-Ex	8/16/2023	8:26	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	8/22/23 1258
Received by: (signature)	Date/Time:	8/22/23 1258
Relinquished by: (signature)	Date/Time:	8.22.23 1746
Received by: (signature)	Date/Time:	8.22.23 1746
Relinquished by: (signature) 38, 22, 3.9	Date/Time:	8/22/23
Received by: (signature) 26, 56	Date/Time:	1746
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time MCM 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	
	Effective Date: 07/13/2023	

Sample	Soils Jars	Ambers					Plastics												VOA Vials						Other / Fill in				
	(Circle Amb/Clear)	1 Liter			250mL	100mL	1 Liter		500mL		250mL																		
	16oz Amb/Clear	Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact					
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													
17	3																												
18	1																												
19	1																												
20	1																												

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 12, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3261

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3261-01 6

23H3261-02 7

23H3261-03 8

23H3261-04 9

23H3261-05 10

23H3261-06 11

23H3261-07 12

23H3261-08 13

23H3261-09 14

23H3261-10 15

23H3261-11 16

23H3261-12 17

23H3261-13 18

23H3261-14 19

23H3261-15 20

23H3261-16 21

23H3261-17 22

23H3261-18 23

23H3261-19 24

23H3261-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351286 27

Dual Column RPD Report 29

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/12/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3261

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-181-EX	23H3261-01	Paint		SW-846 8082A	
P-182-EX	23H3261-02	Paint		SW-846 8082A	
P-183-EX	23H3261-03	Paint		SW-846 8082A	
P-184-EX	23H3261-04	Paint		SW-846 8082A	
P-185-EX	23H3261-05	Paint		SW-846 8082A	
P-186-EX	23H3261-06	Paint		SW-846 8082A	
P-187-EX	23H3261-07	Paint		SW-846 8082A	
P-188-EX	23H3261-08	Paint		SW-846 8082A	
P-189-EX	23H3261-09	Paint		SW-846 8082A	
P-190-EX	23H3261-10	Paint		SW-846 8082A	
P-191-EX	23H3261-11	Paint		SW-846 8082A	
P-192-EX	23H3261-12	Paint		SW-846 8082A	
P-193-GC	23H3261-13	Paint		SW-846 8082A	
P-194-GC	23H3261-14	Paint		SW-846 8082A	
P-195-GC	23H3261-15	Paint		SW-846 8082A	
P-196-GC	23H3261-16	Paint		SW-846 8082A	
P-197-GC	23H3261-17	Paint		SW-846 8082A	
P-198-GC	23H3261-18	Paint		SW-846 8082A	
P-199	23H3261-19	Paint		SW-846 8082A	
P-200	23H3261-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351286-MS1, B351286-MSD1

Aroclor-1016 [2C]
B351286-MS1, B351286-MSD1

Aroclor-1260
B351286-MS1, B351286-MSD1

Aroclor-1260 [2C]
B351286-MS1, B351286-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

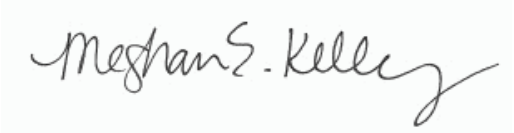
Decachlorobiphenyl
23H3261-04[P-184-EX], 23H3261-05[P-185-EX], 23H3261-06[P-186-EX], 23H3261-09[P-189-EX], B351286-MS1, B351286-MSD1

Decachlorobiphenyl [2C]
23H3261-04[P-184-EX], 23H3261-05[P-185-EX], 23H3261-06[P-186-EX], 23H3261-09[P-189-EX], B351286-MS1, B351286-MSD1

Tetrachloro-m-xylene
23H3261-04[P-184-EX], 23H3261-05[P-185-EX], 23H3261-06[P-186-EX], 23H3261-09[P-189-EX], B351286-MS1, B351286-MSD1

Tetrachloro-m-xylene [2C]
23H3261-04[P-184-EX], 23H3261-05[P-185-EX], 23H3261-06[P-186-EX], 23H3261-09[P-189-EX], B351286-MS1, B351286-MSD1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-181-EX | Sampled: 8/16/2023 08:27

Sample ID: 23H3261-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1221 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1232 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1242 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1248 [1]	11	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1254 [2]	11	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1260 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1262 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG
Aroclor-1268 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/12/23 9:37
Decachlorobiphenyl [2]	93.4	30-150		9/12/23 9:37
Tetrachloro-m-xylene [1]	101	30-150		9/12/23 9:37
Tetrachloro-m-xylene [2]	96.7	30-150		9/12/23 9:37

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-182-EX | Sampled: 8/16/2023 08:28

Sample ID: 23H3261-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1221 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1232 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1242 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1248 [1]	8.8	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1254 [2]	12	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1260 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1262 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG
Aroclor-1268 [1]	ND	2.0	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 9:54	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.2	30-150		9/12/23 9:54
Decachlorobiphenyl [2]	86.0	30-150		9/12/23 9:54
Tetrachloro-m-xylene [1]	95.9	30-150		9/12/23 9:54
Tetrachloro-m-xylene [2]	91.1	30-150		9/12/23 9:54

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-183-EX | Sampled: 8/16/2023 08:29

Sample ID: 23H3261-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1221 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1232 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1242 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1248 [1]	13	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1254 [2]	12	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1260 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1262 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG
Aroclor-1268 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 10:11	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.4	30-150		9/12/23 10:11
Decachlorobiphenyl [2]	90.0	30-150		9/12/23 10:11
Tetrachloro-m-xylene [1]	99.4	30-150		9/12/23 10:11
Tetrachloro-m-xylene [2]	92.5	30-150		9/12/23 10:11

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-184-EX | Sampled: 8/16/2023 08:30

Sample ID: 23H3261-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1221 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1232 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1242 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1248 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1254 [2]	7500	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1260 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1262 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG
Aroclor-1268 [1]	ND	200	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:29	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 10:29
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 10:29
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 10:29
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 10:29

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-185-EX | Sampled: 8/16/2023 08:31

Sample ID: 23H3261-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1221 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1232 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1242 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1248 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1254 [1]	7700	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1260 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1262 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG
Aroclor-1268 [1]	ND	230	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 10:46	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 10:46
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 10:46
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 10:46
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 10:46

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-186-EX | Sampled: 8/16/2023 08:32

Sample ID: 23H3261-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1221 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1232 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1242 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1248 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1254 [1]	9600	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1260 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1262 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG
Aroclor-1268 [1]	ND	220	mg/Kg	500		SW-846 8082A	9/7/23	9/12/23 11:03	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 11:03
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 11:03
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 11:03
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 11:03

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-187-EX | Sampled: 8/16/2023 08:33

Sample ID: 23H3261-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1221 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1232 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1242 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1248 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1254 [1]	38	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1260 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1262 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG
Aroclor-1268 [1]	ND	4.3	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 11:20	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.1	30-150		9/12/23 11:20
Decachlorobiphenyl [2]	88.3	30-150		9/12/23 11:20
Tetrachloro-m-xylene [1]	89.2	30-150		9/12/23 11:20
Tetrachloro-m-xylene [2]	82.5	30-150		9/12/23 11:20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-188-EX | Sampled: 8/16/2023 08:34

Sample ID: 23H3261-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1221 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1232 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1242 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1248 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1254 [1]	110	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1260 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1262 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG
Aroclor-1268 [1]	ND	8.1	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 11:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	119	30-150		9/12/23 11:37
Decachlorobiphenyl [2]	108	30-150		9/12/23 11:37
Tetrachloro-m-xylene [1]	109	30-150		9/12/23 11:37
Tetrachloro-m-xylene [2]	100	30-150		9/12/23 11:37

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-189-EX | Sampled: 8/16/2023 08:35

Sample ID: 23H3261-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1221 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1232 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1242 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1248 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1254 [1]	360	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1260 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1262 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG
Aroclor-1268 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 11:54	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 11:54
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 11:54
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 11:54
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 11:54

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-190-EX | Sampled: 8/16/2023 08:36

Sample ID: 23H3261-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1221 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1232 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1242 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1248 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1254 [1]	1.1	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1260 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1262 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG
Aroclor-1268 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:12	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.2	30-150		9/12/23 12:12
Decachlorobiphenyl [2]	94.5	30-150		9/12/23 12:12
Tetrachloro-m-xylene [1]	93.3	30-150		9/12/23 12:12
Tetrachloro-m-xylene [2]	93.6	30-150		9/12/23 12:12

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-191-EX | Sampled: 8/16/2023 08:37

Sample ID: 23H3261-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1221 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1232 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1242 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1248 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1254 [2]	1.0	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1260 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1262 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG
Aroclor-1268 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 9:56	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.5	30-150		9/12/23 9:56
Decachlorobiphenyl [2]	80.9	30-150		9/12/23 9:56
Tetrachloro-m-xylene [1]	81.2	30-150		9/12/23 9:56
Tetrachloro-m-xylene [2]	85.3	30-150		9/12/23 9:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-192-EX | Sampled: 8/16/2023 08:38

Sample ID: 23H3261-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1221 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1232 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1242 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1248 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1254 [2]	1.7	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1260 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1262 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG
Aroclor-1268 [1]	ND	0.41	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:08	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.1	30-150		9/12/23 10:08
Decachlorobiphenyl [2]	76.5	30-150		9/12/23 10:08
Tetrachloro-m-xylene [1]	76.5	30-150		9/12/23 10:08
Tetrachloro-m-xylene [2]	80.6	30-150		9/12/23 10:08

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-193-GC | Sampled: 8/16/2023 08:39

Sample ID: 23H3261-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1221 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1232 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1242 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1248 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1254 [2]	1.6	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1260 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1262 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG
Aroclor-1268 [1]	ND	0.48	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:26	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.7	30-150		9/12/23 10:26
Decachlorobiphenyl [2]	81.7	30-150		9/12/23 10:26
Tetrachloro-m-xylene [1]	83.1	30-150		9/12/23 10:26
Tetrachloro-m-xylene [2]	85.6	30-150		9/12/23 10:26

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-194-GC | Sampled: 8/16/2023 08:40

Sample ID: 23H3261-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1221 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1232 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1242 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1248 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1254 [1]	0.64	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1260 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1262 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG
Aroclor-1268 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 10:43	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.8	30-150		9/12/23 10:43
Decachlorobiphenyl [2]	82.3	30-150		9/12/23 10:43
Tetrachloro-m-xylene [1]	82.3	30-150		9/12/23 10:43
Tetrachloro-m-xylene [2]	85.3	30-150		9/12/23 10:43

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-195-GC | Sampled: 8/16/2023 08:41

Sample ID: 23H3261-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1221 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1232 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1242 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1248 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1254 [2]	0.85	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1260 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1262 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG
Aroclor-1268 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:01	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.6	30-150		9/12/23 11:01
Decachlorobiphenyl [2]	80.9	30-150		9/12/23 11:01
Tetrachloro-m-xylene [1]	81.9	30-150		9/12/23 11:01
Tetrachloro-m-xylene [2]	84.9	30-150		9/12/23 11:01

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-196-GC | Sampled: 8/16/2023 08:42

Sample ID: 23H3261-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1221 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1232 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1242 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1248 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1254 [1]	1.5	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1260 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1262 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG
Aroclor-1268 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:18	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.4	30-150		9/12/23 11:18
Decachlorobiphenyl [2]	82.0	30-150		9/12/23 11:18
Tetrachloro-m-xylene [1]	82.2	30-150		9/12/23 11:18
Tetrachloro-m-xylene [2]	84.8	30-150		9/12/23 11:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-197-GC | Sampled: 8/16/2023 08:43

Sample ID: 23H3261-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1221 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1232 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1242 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1248 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1254 [1]	0.57	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1260 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1262 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG
Aroclor-1268 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:35	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.4	30-150		9/12/23 11:35
Decachlorobiphenyl [2]	70.1	30-150		9/12/23 11:35
Tetrachloro-m-xylene [1]	69.8	30-150		9/12/23 11:35
Tetrachloro-m-xylene [2]	72.8	30-150		9/12/23 11:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-198-GC | Sampled: 8/16/2023 08:44

Sample ID: 23H3261-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1221 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1232 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1242 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1248 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1254 [2]	1.1	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1260 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1262 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG
Aroclor-1268 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 11:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.3	30-150		9/12/23 11:53
Decachlorobiphenyl [2]	84.0	30-150		9/12/23 11:53
Tetrachloro-m-xylene [1]	83.8	30-150		9/12/23 11:53
Tetrachloro-m-xylene [2]	87.1	30-150		9/12/23 11:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-199 | Sampled: 8/16/2023 08:45

Sample ID: 23H3261-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1221 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1232 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1242 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1248 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1254 [2]	7.6	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1260 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1262 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG
Aroclor-1268 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 12:10	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.2	30-150		9/12/23 12:10
Decachlorobiphenyl [2]	78.2	30-150		9/12/23 12:10
Tetrachloro-m-xylene [1]	81.3	30-150		9/12/23 12:10
Tetrachloro-m-xylene [2]	80.8	30-150		9/12/23 12:10

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3261

Date Received: 8/22/2023

Field Sample #: P-200 | Sampled: 8/16/2023 08:46

Sample ID: 23H3261-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1221 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1232 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1242 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1248 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1254 [1]	4.6	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1260 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1262 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG
Aroclor-1268 [1]	ND	0.46	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 12:28	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	70.4	30-150		9/12/23 12:28
Decachlorobiphenyl [2]	70.9	30-150		9/12/23 12:28
Tetrachloro-m-xylene [1]	72.8	30-150		9/12/23 12:28
Tetrachloro-m-xylene [2]	74.6	30-150		9/12/23 12:28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3261-01 [P-181-EX]	B351286	0.214	10.0	09/07/23
23H3261-02 [P-182-EX]	B351286	0.253	10.0	09/07/23
23H3261-03 [P-183-EX]	B351286	0.234	10.0	09/07/23
23H3261-04 [P-184-EX]	B351286	0.248	10.0	09/07/23
23H3261-05 [P-185-EX]	B351286	0.220	10.0	09/07/23
23H3261-06 [P-186-EX]	B351286	0.223	10.0	09/07/23
23H3261-07 [P-187-EX]	B351286	0.231	10.0	09/07/23
23H3261-08 [P-188-EX]	B351286	0.246	10.0	09/07/23
23H3261-09 [P-189-EX]	B351286	0.243	10.0	09/07/23
23H3261-10 [P-190-EX]	B351286	0.224	10.0	09/07/23
23H3261-11 [P-191-EX]	B351286	0.229	10.0	09/07/23
23H3261-12 [P-192-EX]	B351286	0.242	10.0	09/07/23
23H3261-13 [P-193-GC]	B351286	0.210	10.0	09/07/23
23H3261-14 [P-194-GC]	B351286	0.264	10.0	09/07/23
23H3261-15 [P-195-GC]	B351286	0.270	10.0	09/07/23
23H3261-16 [P-196-GC]	B351286	0.239	10.0	09/07/23
23H3261-17 [P-197-GC]	B351286	0.270	10.0	09/07/23
23H3261-18 [P-198-GC]	B351286	0.249	10.0	09/07/23
23H3261-19 [P-199]	B351286	0.265	10.0	09/07/23
23H3261-20 [P-200]	B351286	0.216	10.0	09/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351286 - SW-846 3540C										
Blank (B351286-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.48	mg/Kg							
Aroclor-1016 [2C]	ND	0.48	mg/Kg							
Aroclor-1221	ND	0.48	mg/Kg							
Aroclor-1221 [2C]	ND	0.48	mg/Kg							
Aroclor-1232	ND	0.48	mg/Kg							
Aroclor-1232 [2C]	ND	0.48	mg/Kg							
Aroclor-1242	ND	0.48	mg/Kg							
Aroclor-1242 [2C]	ND	0.48	mg/Kg							
Aroclor-1248	ND	0.48	mg/Kg							
Aroclor-1248 [2C]	ND	0.48	mg/Kg							
Aroclor-1254	ND	0.48	mg/Kg							
Aroclor-1254 [2C]	ND	0.48	mg/Kg							
Aroclor-1260	ND	0.48	mg/Kg							
Aroclor-1260 [2C]	ND	0.48	mg/Kg							
Aroclor-1262	ND	0.48	mg/Kg							
Aroclor-1262 [2C]	ND	0.48	mg/Kg							
Aroclor-1268	ND	0.48	mg/Kg							
Aroclor-1268 [2C]	ND	0.48	mg/Kg							
Surrogate: Decachlorobiphenyl	*9.39*		mg/Kg	9.62		97.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.73*		mg/Kg	9.62		90.7	30-150			
Surrogate: Tetrachloro-m-xylene	*8.64*		mg/Kg	9.62		89.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.43*		mg/Kg	9.62		87.6	30-150			
LCS (B351286-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.8	0.37	mg/Kg	1.87		94.5	40-140			
Aroclor-1016 [2C]	1.7	0.37	mg/Kg	1.87		91.3	40-140			
Aroclor-1260	1.6	0.37	mg/Kg	1.87		84.7	40-140			
Aroclor-1260 [2C]	1.5	0.37	mg/Kg	1.87		80.7	40-140			
Surrogate: Decachlorobiphenyl	*7.08*		mg/Kg	7.47		94.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.71*		mg/Kg	7.47		89.8	30-150			
Surrogate: Tetrachloro-m-xylene	*7.00*		mg/Kg	7.47		93.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.78*		mg/Kg	7.47		90.8	30-150			
LCS Dup (B351286-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	2.2	0.49	mg/Kg	2.46		88.0	40-140	20.4	30	
Aroclor-1016 [2C]	2.1	0.49	mg/Kg	2.46		85.0	40-140	20.5	30	
Aroclor-1260	1.9	0.49	mg/Kg	2.46		77.0	40-140	18.1	30	
Aroclor-1260 [2C]	1.9	0.49	mg/Kg	2.46		79.1	40-140	25.6	30	
Surrogate: Decachlorobiphenyl	*9.56*		mg/Kg	9.85		97.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*9.12*		mg/Kg	9.85		92.5	30-150			
Surrogate: Tetrachloro-m-xylene	*9.43*		mg/Kg	9.85		95.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*9.31*		mg/Kg	9.85		94.5	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351286 - SW-846 3540C											
Matrix Spike (B351286-MS1)	**Source: 23H3261-09**			Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	13	19	mg/Kg	1.91	ND	**678**	*	40-140			MS-21
Aroclor-1016 [2C]	32	19	mg/Kg	1.91	ND	**1680**	*	40-140			MS-21
Aroclor-1260	130	19	mg/Kg	1.91	ND	**6780**	*	40-140			MS-21
Aroclor-1260 [2C]	110	19	mg/Kg	1.91	ND	**5830**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	7.64			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	7.64			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	7.64			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	7.64			*	30-150			S-01
Matrix Spike Dup (B351286-MSD1)	**Source: 23H3261-09**			Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	13	20	mg/Kg	1.95	ND	**677**	*	40-140	2.18	50	MS-21
Aroclor-1016 [2C]	30	20	mg/Kg	1.95	ND	**1550**	*	40-140	6.03	50	MS-21
Aroclor-1260	160	20	mg/Kg	1.95	ND	**8070**	*	40-140	19.6	50	MS-21
Aroclor-1260 [2C]	120	20	mg/Kg	1.95	ND	**6300**	*	40-140	9.98	50	MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	7.82			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	7.82			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	7.82			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	7.82			*	30-150			S-01

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-181-EX

Lab Sample ID: 23H3261-01 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	10	9.5
Aroclor-1254	1	0.000	0.000	0.000	9.6	
	2	0.000	0.000	0.000	11	13.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-182-EX

Lab Sample ID: 23H3261-02

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	8.8	
	2	0.000	0.000	0.000	7.5	16.0
Aroclor-1254	1	0.000	0.000	0.000	10	
	2	0.000	0.000	0.000	12	18.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-183-EX

Lab Sample ID: 23H3261-03 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	11	16.7
Aroclor-1254	1	0.000	0.000	0.000	10	
	2	0.000	0.000	0.000	12	18.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-184-EX

Lab Sample ID: 23H3261-04 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7500	
	2	0.000	0.000	0.000	7500	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-185-EX

Lab Sample ID: 23H3261-05 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7700	
	2	0.000	0.000	0.000	7300	5.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-186-EX

Lab Sample ID: 23H3261-06 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	9600	
	2	0.000	0.000	0.000	9100	5.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-187-EX

Lab Sample ID: 23H3261-07 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	38	
	2	0.000	0.000	0.000	37	2.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-188-EX

Lab Sample ID: 23H3261-08 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	110	
	2	0.000	0.000	0.000	110	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-189-EX

Lab Sample ID: 23H3261-09 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	360	
	2	0.000	0.000	0.000	350	2.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-190-EX

Lab Sample ID: 23H3261-10

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.1	
	2	0.000	0.000	0.000	0.85	25.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-191-EX

Lab Sample ID: 23H3261-11

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.79	
	2	0.000	0.000	0.000	1.0	23.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-192-EX

Lab Sample ID: 23H3261-12 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.7	12.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-193-GC

Lab Sample ID: 23H3261-13

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.6	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-194-GC

Lab Sample ID: 23H3261-14

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.64	
	2	0.000	0.000	0.000	0.56	13.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-195-GC

Lab Sample ID: 23H3261-15

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.82	
	2	0.000	0.000	0.000	0.85	3.6

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-196-GC

Lab Sample ID: 23H3261-16

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.4	6.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-197-GC

Lab Sample ID: 23H3261-17

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.57	
	2	0.000	0.000	0.000	0.52	9.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-198-GC

Lab Sample ID: 23H3261-18

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	1.1	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-199

Lab Sample ID: 23H3261-19

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.8	
	2	0.000	0.000	0.000	7.6	26.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-200

Lab Sample ID: 23H3261-20

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.6	
	2	0.000	0.000	0.000	4.0	14.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351286-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.8	
	2	0.000	0.000	0.000	1.7	5.7
Aroclor-1260	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.5	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351286-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.2	
	2	0.000	0.000	0.000	2.1	4.7
Aroclor-1260	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.9	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351286-MS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	32	84.4
Aroclor-1260	1	0.000	0.000	0.000	130	
	2	0.000	0.000	0.000	110	16.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351286-MSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	30	79.1
Aroclor-1260	1	0.000	0.000	0.000	160	
	2	0.000	0.000	0.000	120	28.6

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

2343261

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-181-Ex	8/16/2023	8;27	GRAB	O	U		1				x
2	P-182-Ex	8/16/2023	8:28	GRAB	O	U		1				x
3	P-183-Ex	8/16/2023	8:29	GRAB	O	U		1				x
4	P-184-Ex	8/16/2023	8:30	GRAB	O	U		1				x
5	P-185-Ex	8/16/2023	8:31	GRAB	O	U		1				x
6	P-186-Ex	8/16/2023	8:32	GRAB	O	U		1				x
7	P-187-Ex	8/16/2023	8:33	GRAB	O	U		1				x
8	P-188-Ex	8/16/2023	8:34	GRAB	O	U		1				x
9	P-189-Ex	8/16/2023	8:35	GRAB	O	U		3				x
10	P-190-Ex	8/16/2023	8:36	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 1245 8.22.23	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 1245 8.22.23	
Relinquished by: (signature)	Date/Time: 1746 8.22.23	
Received by: (signature) 38.2, 5.9	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3261

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-191-Ex	8/16/2023	8:37	GRAB	O	U		1				x
12	P-192-Ex	8/16/2023	8:38	GRAB	O	U		1				x
13	P-193-GC	8/16/2023	8:39	GRAB	O	U		1				x
14	P-194-GC	8/16/2023	8:40	GRAB	O	U		1				x
15	P-195-GC	8/16/2023	8:41	GRAB	O	U		1				x
16	P-196-GC	8/16/2023	8:42	GRAB	O	U		1				x
17	P-197-GC	8/16/2023	8:43	GRAB	O	U		1				x
18	P-198-GC	8/16/2023	8:44	GRAB	O	U		1				x
19	P-199	8/16/2023	8:45	GRAB	O	U		1				x
20	P-200	8/16/2023	8:46	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	8-22-23 1325
Received by: (signature)	8-22-23 1325
Relinquished by: (signature)	8-22-23 1746
Received by: (signature) 3.8, 2.2, 3.9	8/22/23
Relinquished by: (signature) 26, 5.6	1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen seperate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)			Ambers				Plastics												VOA Vials					Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			100mL	1 Liter		500mL		250mL														
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact				
1			1																											
2			1																											
3			1																											
4			1																											
5			1																											
6			1																											
7			1																											
8			1																											
9			2																											
10			1																											
11			1																											
12			1																											
13			1																											
14			1																											
15			1																											
16			1																											
17			1																											
18			1																											
19			1																											
20			1																											

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3264

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3264-01 6

23H3264-02 7

23H3264-03 8

23H3264-04 9

23H3264-05 10

23H3264-06 11

23H3264-07 12

23H3264-08 13

23H3264-09 14

23H3264-10 15

23H3264-11 16

23H3264-12 17

23H3264-13 18

23H3264-14 19

23H3264-15 20

23H3264-16 21

23H3264-17 22

23H3264-18 23

23H3264-19 24

23H3264-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351289 27

B351344 28

B351347 29

Dual Column RPD Report 30

Flag/Qualifier Summary 56

Certifications 57

Chain of Custody/Sample Receipt 58

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3264

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-201	23H3264-01	Product/Solid		SW-846 8082A	
P-202	23H3264-02	Paint		SW-846 8082A	
P-203-EX	23H3264-03	Product/Solid		SW-846 8082A	
P-204-R17W	23H3264-04	Paint		SW-846 8082A	
P-205-R17W	23H3264-05	Paint		SW-846 8082A	
P-206-R17W	23H3264-06	Paint		SW-846 8082A	
P-207-R16C	23H3264-07	Paint		SW-846 8082A	
P-208-R14SP	23H3264-08	Product/Solid		SW-846 8082A	
P-209-R16SP	23H3264-09	Product/Solid		SW-846 8082A	
P-210-R16NWP	23H3264-10	Paint		SW-846 8082A	
P-211-R15CP	23H3264-11	Product/Solid		SW-846 8082A	
P-212-R11EP	23H3264-12	Paint		SW-846 8082A	
P-213-R12CPB	23H3264-13	Paint		SW-846 8082A	
P-214-R12CDW	23H3264-14	Product/Solid		SW-846 8082A	
P-215-R15CPW	23H3264-15	Paint		SW-846 8082A	
P-216-R13CP	23H3264-16	Product/Solid		SW-846 8082A	
P-217-R11SDW	23H3264-17	Paint		SW-846 8082A	
P-218-R13WT	23H3264-18	Paint		SW-846 8082A	
P-219-R14EDW	23H3264-19	Paint		SW-846 8082A	
P-220-S12C	23H3264-20	Product/Solid		SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-201 | Sampled: 8/16/2023 08:47

Sample ID: 23H3264-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1221 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1232 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1242 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1248 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1254 [1]	7.9	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1260 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1262 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM
Aroclor-1268 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:42	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.8	30-150		9/13/23 10:42
Decachlorobiphenyl [2]	95.7	30-150		9/13/23 10:42
Tetrachloro-m-xylene [1]	94.8	30-150		9/13/23 10:42
Tetrachloro-m-xylene [2]	94.4	30-150		9/13/23 10:42

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-202 | Sampled: 8/16/2023 08:48

Sample ID: 23H3264-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1221 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1232 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1242 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1248 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1254 [2]	8.5	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1260 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1262 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM
Aroclor-1268 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:36	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.3	30-150		9/12/23 15:36
Decachlorobiphenyl [2]	83.3	30-150		9/12/23 15:36
Tetrachloro-m-xylene [1]	83.6	30-150		9/12/23 15:36
Tetrachloro-m-xylene [2]	85.1	30-150		9/12/23 15:36

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-203-EX | Sampled: 8/16/2023 08:49

Sample ID: 23H3264-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1221 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1232 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1242 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1248 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1254 [2]	0.53	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1260 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1262 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG
Aroclor-1268 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 21:20	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.8	30-150		9/12/23 21:20
Decachlorobiphenyl [2]	86.5	30-150		9/12/23 21:20
Tetrachloro-m-xylene [1]	82.1	30-150		9/12/23 21:20
Tetrachloro-m-xylene [2]	87.2	30-150		9/12/23 21:20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-204-R17W | Sampled: 8/16/2023 08:50

Sample ID: 23H3264-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1221 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1232 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1242 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1248 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1254 [2]	4.8	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1260 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1262 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM
Aroclor-1268 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 15:53	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.8	30-150		9/12/23 15:53
Decachlorobiphenyl [2]	69.6	30-150		9/12/23 15:53
Tetrachloro-m-xylene [1]	68.0	30-150		9/12/23 15:53
Tetrachloro-m-xylene [2]	71.7	30-150		9/12/23 15:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-205-R17W | Sampled: 8/16/2023 08:51

Sample ID: 23H3264-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1221 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1232 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1242 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1248 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1254 [2]	8.2	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1260 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1262 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM
Aroclor-1268 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:11	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.6	30-150		9/12/23 16:11
Decachlorobiphenyl [2]	82.4	30-150		9/12/23 16:11
Tetrachloro-m-xylene [1]	74.0	30-150		9/12/23 16:11
Tetrachloro-m-xylene [2]	84.5	30-150		9/12/23 16:11

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-206-R17W | Sampled: 8/16/2023 08:52

Sample ID: 23H3264-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1221 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1232 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1242 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1248 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1254 [2]	10	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1260 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1262 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM
Aroclor-1268 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 16:28	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.2	30-150		9/12/23 16:28
Decachlorobiphenyl [2]	83.4	30-150		9/12/23 16:28
Tetrachloro-m-xylene [1]	71.1	30-150		9/12/23 16:28
Tetrachloro-m-xylene [2]	84.3	30-150		9/12/23 16:28

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-207-R16C | Sampled: 8/16/2023 08:53

Sample ID: 23H3264-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1254 [2]	16	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 16:46	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.0	30-150		9/12/23 16:46
Decachlorobiphenyl [2]	83.8	30-150		9/12/23 16:46
Tetrachloro-m-xylene [1]	72.8	30-150		9/12/23 16:46
Tetrachloro-m-xylene [2]	74.8	30-150		9/12/23 16:46

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-208-R14SP | Sampled: 8/16/2023 08:54

Sample ID: 23H3264-08

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1221 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1232 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1242 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1248 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1254 [2]	1.4	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1260 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1262 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG
Aroclor-1268 [1]	ND	0.48	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 21:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	72.7	30-150		9/12/23 21:37
Decachlorobiphenyl [2]	67.1	30-150		9/12/23 21:37
Tetrachloro-m-xylene [1]	77.2	30-150		9/12/23 21:37
Tetrachloro-m-xylene [2]	74.7	30-150		9/12/23 21:37

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-209-R16SP | Sampled: 8/16/2023 08:55

Sample ID: 23H3264-09

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1221 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1232 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1242 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1248 [1]	2.1	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1254 [1]	2.3	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1260 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1262 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG
Aroclor-1268 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 21:54	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.3	30-150		9/12/23 21:54
Decachlorobiphenyl [2]	86.4	30-150		9/12/23 21:54
Tetrachloro-m-xylene [1]	83.2	30-150		9/12/23 21:54
Tetrachloro-m-xylene [2]	82.9	30-150		9/12/23 21:54

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-210-R16NWP | Sampled: 8/16/2023 08:56

Sample ID: 23H3264-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1254 [2]	26	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:03	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	118	30-150		9/12/23 17:03
Decachlorobiphenyl [2]	113	30-150		9/12/23 17:03
Tetrachloro-m-xylene [1]	108	30-150		9/12/23 17:03
Tetrachloro-m-xylene [2]	109	30-150		9/12/23 17:03

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-211-R15CP | Sampled: 8/16/2023 08:57

Sample ID: 23H3264-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1221 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1232 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1242 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1248 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1254 [1]	0.59	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1260 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1262 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG
Aroclor-1268 [1]	ND	0.43	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 22:11	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.3	30-150		9/12/23 22:11
Decachlorobiphenyl [2]	89.7	30-150		9/12/23 22:11
Tetrachloro-m-xylene [1]	85.4	30-150		9/12/23 22:11
Tetrachloro-m-xylene [2]	82.9	30-150		9/12/23 22:11

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-212-R11EP | Sampled: 8/16/2023 08:58

Sample ID: 23H3264-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1254 [1]	16	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:21	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	108	30-150		9/12/23 17:21
Decachlorobiphenyl [2]	103	30-150		9/12/23 17:21
Tetrachloro-m-xylene [1]	99.0	30-150		9/12/23 17:21
Tetrachloro-m-xylene [2]	118	30-150		9/12/23 17:21

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-213-R12CPB | Sampled: 8/16/2023 08:59

Sample ID: 23H3264-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1221 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1232 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1242 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1248 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1254 [2]	9.0	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1260 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1262 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM
Aroclor-1268 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 17:38	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/12/23 17:38
Decachlorobiphenyl [2]	98.0	30-150		9/12/23 17:38
Tetrachloro-m-xylene [1]	90.5	30-150		9/12/23 17:38
Tetrachloro-m-xylene [2]	91.8	30-150		9/12/23 17:38

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-214-R12CDW | Sampled: 8/16/2023 09:00

Sample ID: 23H3264-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1221 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1232 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1242 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1248 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1254 [1]	5.3	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1260 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1262 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM
Aroclor-1268 [1]	ND	1.0	mg/Kg	10		SW-846 8082A	9/7/23	9/13/23 10:59	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.3	30-150		9/13/23 10:59
Decachlorobiphenyl [2]	75.3	30-150		9/13/23 10:59
Tetrachloro-m-xylene [1]	69.2	30-150		9/13/23 10:59
Tetrachloro-m-xylene [2]	69.3	30-150		9/13/23 10:59

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-215-R15CPW | Sampled: 8/16/2023 09:01

Sample ID: 23H3264-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1221 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1232 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1242 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1248 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1254 [2]	25	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1260 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1262 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM
Aroclor-1268 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 17:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/12/23 17:56
Decachlorobiphenyl [2]	96.5	30-150		9/12/23 17:56
Tetrachloro-m-xylene [1]	90.7	30-150		9/12/23 17:56
Tetrachloro-m-xylene [2]	91.9	30-150		9/12/23 17:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-216-R13CP | Sampled: 8/16/2023 09:02

Sample ID: 23H3264-16

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1221 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1232 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1242 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1248 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1254 [2]	0.21	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1260 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1262 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG
Aroclor-1268 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	9/7/23	9/12/23 22:29	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/12/23 22:29
Decachlorobiphenyl [2]	97.8	30-150		9/12/23 22:29
Tetrachloro-m-xylene [1]	88.6	30-150		9/12/23 22:29
Tetrachloro-m-xylene [2]	90.6	30-150		9/12/23 22:29

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-217-R11SDW | Sampled: 8/16/2023 09:03

Sample ID: 23H3264-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1221 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1232 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1242 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1248 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1254 [2]	6.2	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1260 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1262 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM
Aroclor-1268 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:13	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.0	30-150		9/12/23 18:13
Decachlorobiphenyl [2]	94.7	30-150		9/12/23 18:13
Tetrachloro-m-xylene [1]	87.8	30-150		9/12/23 18:13
Tetrachloro-m-xylene [2]	88.4	30-150		9/12/23 18:13

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-218-R13WT | Sampled: 8/16/2023 09:04

Sample ID: 23H3264-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1221 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1232 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1242 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1248 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1254 [2]	11	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1260 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1262 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM
Aroclor-1268 [1]	ND	3.4	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 18:31	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.5	30-150		9/12/23 18:31
Decachlorobiphenyl [2]	79.0	30-150		9/12/23 18:31
Tetrachloro-m-xylene [1]	72.4	30-150		9/12/23 18:31
Tetrachloro-m-xylene [2]	75.9	30-150		9/12/23 18:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-219-R14EDW | Sampled: 8/16/2023 09:05

Sample ID: 23H3264-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1221 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1232 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1242 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1248 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1254 [1]	6.8	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1260 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1262 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM
Aroclor-1268 [1]	ND	1.8	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 18:48	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.7	30-150		9/12/23 18:48
Decachlorobiphenyl [2]	96.2	30-150		9/12/23 18:48
Tetrachloro-m-xylene [1]	86.5	30-150		9/12/23 18:48
Tetrachloro-m-xylene [2]	88.1	30-150		9/12/23 18:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3264

Date Received: 8/22/2023

Field Sample #: P-220-S12C | Sampled: 8/16/2023 09:06

Sample ID: 23H3264-20

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1221 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1232 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1242 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1248 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1254 [1]	19	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1260 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1262 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM
Aroclor-1268 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 19:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/12/23 19:05
Decachlorobiphenyl [2]	98.7	30-150		9/12/23 19:05
Tetrachloro-m-xylene [1]	80.3	30-150		9/12/23 19:05
Tetrachloro-m-xylene [2]	82.1	30-150		9/12/23 19:05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3264-02 [P-202]	B351289	0.260	10.0	09/07/23
23H3264-04 [P-204-R17W]	B351289	0.272	10.0	09/07/23
23H3264-05 [P-205-R17W]	B351289	0.218	10.0	09/07/23
23H3264-06 [P-206-R17W]	B351289	0.260	10.0	09/07/23
23H3264-07 [P-207-R16C]	B351289	0.235	10.0	09/07/23
23H3264-10 [P-210-R16NWP]	B351289	0.226	10.0	09/07/23
23H3264-12 [P-212-R11EP]	B351289	0.258	10.0	09/07/23
23H3264-13 [P-213-R12CPB]	B351289	0.216	10.0	09/07/23
23H3264-15 [P-215-R15CPW]	B351289	0.247	10.0	09/07/23
23H3264-17 [P-217-R11SDW]	B351289	0.271	10.0	09/07/23
23H3264-18 [P-218-R13WT]	B351289	0.290	10.0	09/07/23
23H3264-19 [P-219-R14EDW]	B351289	0.283	10.0	09/07/23
23H3264-20 [P-220-S12C]	B351289	0.290	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3264-01 [P-201]	B351344	2.00	10.0	09/07/23
23H3264-14 [P-214-R12CDW]	B351344	2.00	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3264-03 [P-203-EX]	B351347	2.24	10.0	09/07/23
23H3264-08 [P-208-R14SP]	B351347	2.10	10.0	09/07/23
23H3264-09 [P-209-R16SP]	B351347	2.06	10.0	09/07/23
23H3264-11 [P-211-R15CP]	B351347	2.33	10.0	09/07/23
23H3264-16 [P-216-R13CP]	B351347	2.18	10.0	09/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351289 - SW-846 3540C										
Blank (B351289-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.50	mg/Kg							
Aroclor-1016 [2C]	ND	0.50	mg/Kg							
Aroclor-1221	ND	0.50	mg/Kg							
Aroclor-1221 [2C]	ND	0.50	mg/Kg							
Aroclor-1232	ND	0.50	mg/Kg							
Aroclor-1232 [2C]	ND	0.50	mg/Kg							
Aroclor-1242	ND	0.50	mg/Kg							
Aroclor-1242 [2C]	ND	0.50	mg/Kg							
Aroclor-1248	ND	0.50	mg/Kg							
Aroclor-1248 [2C]	ND	0.50	mg/Kg							
Aroclor-1254	ND	0.50	mg/Kg							
Aroclor-1254 [2C]	ND	0.50	mg/Kg							
Aroclor-1260	ND	0.50	mg/Kg							
Aroclor-1260 [2C]	ND	0.50	mg/Kg							
Aroclor-1262	ND	0.50	mg/Kg							
Aroclor-1262 [2C]	ND	0.50	mg/Kg							
Aroclor-1268	ND	0.50	mg/Kg							
Aroclor-1268 [2C]	ND	0.50	mg/Kg							
Surrogate: Decachlorobiphenyl	*6.63*		mg/Kg	9.94		66.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.57*		mg/Kg	9.94		66.1	30-150			
Surrogate: Tetrachloro-m-xylene	*5.88*		mg/Kg	9.94		59.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.55*		mg/Kg	9.94		65.9	30-150			
LCS (B351289-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.4	0.48	mg/Kg	2.41		56.9	40-140			
Aroclor-1016 [2C]	1.7	0.48	mg/Kg	2.41		70.0	40-140			
Aroclor-1260	1.5	0.48	mg/Kg	2.41		64.0	40-140			
Aroclor-1260 [2C]	1.6	0.48	mg/Kg	2.41		66.7	40-140			
Surrogate: Decachlorobiphenyl	*7.23*		mg/Kg	9.62		75.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.14*		mg/Kg	9.62		74.2	30-150			
Surrogate: Tetrachloro-m-xylene	*6.71*		mg/Kg	9.62		69.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.22*		mg/Kg	9.62		75.0	30-150			
LCS Dup (B351289-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.3	0.47	mg/Kg	2.37		55.9	40-140	3.49	30	
Aroclor-1016 [2C]	1.5	0.47	mg/Kg	2.37		62.3	40-140	13.3	30	
Aroclor-1260	1.4	0.47	mg/Kg	2.37		57.4	40-140	12.5	30	
Aroclor-1260 [2C]	1.5	0.47	mg/Kg	2.37		62.0	40-140	8.95	30	
Surrogate: Decachlorobiphenyl	*6.66*		mg/Kg	9.47		70.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.52*		mg/Kg	9.47		68.9	30-150			
Surrogate: Tetrachloro-m-xylene	*6.30*		mg/Kg	9.47		66.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.83*		mg/Kg	9.47		72.2	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351344 - SW-846 3540C										
Blank (B351344-BLK1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.829*		mg/Kg	1.00		82.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.826*		mg/Kg	1.00		82.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.785*		mg/Kg	1.00		78.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.789*		mg/Kg	1.00		78.9	30-150			
LCS (B351344-BS1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.61	0.10	mg/Kg	1.00		60.8	40-140			
Aroclor-1016 [2C]	0.63	0.10	mg/Kg	1.00		63.3	40-140			
Aroclor-1260	0.61	0.10	mg/Kg	1.00		60.5	40-140			
Aroclor-1260 [2C]	0.61	0.10	mg/Kg	1.00		61.2	40-140			
Surrogate: Decachlorobiphenyl	*0.767*		mg/Kg	1.00		76.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.770*		mg/Kg	1.00		77.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.684*		mg/Kg	1.00		68.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.688*		mg/Kg	1.00		68.8	30-150			
LCS Dup (B351344-BSD1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.61	0.10	mg/Kg	1.00		60.9	40-140	0.214	30	
Aroclor-1016 [2C]	0.63	0.10	mg/Kg	1.00		63.2	40-140	0.179	30	
Aroclor-1260	0.60	0.10	mg/Kg	1.00		60.0	40-140	0.905	30	
Aroclor-1260 [2C]	0.61	0.10	mg/Kg	1.00		60.8	40-140	0.605	30	
Surrogate: Decachlorobiphenyl	*0.792*		mg/Kg	1.00		79.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.790*		mg/Kg	1.00		79.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.708*		mg/Kg	1.00		70.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.714*		mg/Kg	1.00		71.4	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351347 - SW-846 3540C										
Blank (B351347-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.090	mg/Kg							
Aroclor-1016 [2C]	ND	0.090	mg/Kg							
Aroclor-1221	ND	0.090	mg/Kg							
Aroclor-1221 [2C]	ND	0.090	mg/Kg							
Aroclor-1232	ND	0.090	mg/Kg							
Aroclor-1232 [2C]	ND	0.090	mg/Kg							
Aroclor-1242	ND	0.090	mg/Kg							
Aroclor-1242 [2C]	ND	0.090	mg/Kg							
Aroclor-1248	ND	0.090	mg/Kg							
Aroclor-1248 [2C]	ND	0.090	mg/Kg							
Aroclor-1254	ND	0.090	mg/Kg							
Aroclor-1254 [2C]	ND	0.090	mg/Kg							
Aroclor-1260	ND	0.090	mg/Kg							
Aroclor-1260 [2C]	ND	0.090	mg/Kg							
Aroclor-1262	ND	0.090	mg/Kg							
Aroclor-1262 [2C]	ND	0.090	mg/Kg							
Aroclor-1268	ND	0.090	mg/Kg							
Aroclor-1268 [2C]	ND	0.090	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.947*		mg/Kg	0.905		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.921*		mg/Kg	0.905		102	30-150			
Surrogate: Tetrachloro-m-xylene	*0.801*		mg/Kg	0.905		88.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.795*		mg/Kg	0.905		87.9	30-150			
LCS (B351347-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	0.62	0.086	mg/Kg	0.862		71.8	40-140			
Aroclor-1016 [2C]	0.65	0.086	mg/Kg	0.862		75.2	40-140			
Aroclor-1260	0.66	0.086	mg/Kg	0.862		77.1	40-140			
Aroclor-1260 [2C]	0.70	0.086	mg/Kg	0.862		81.0	40-140			
Surrogate: Decachlorobiphenyl	*0.779*		mg/Kg	0.862		90.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.756*		mg/Kg	0.862		87.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.611*		mg/Kg	0.862		70.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.615*		mg/Kg	0.862		71.3	30-150			
LCS Dup (B351347-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	0.69	0.091	mg/Kg	0.913		75.6	40-140	11.0	30	
Aroclor-1016 [2C]	0.73	0.091	mg/Kg	0.913		79.6	40-140	11.4	30	
Aroclor-1260	0.72	0.091	mg/Kg	0.913		78.7	40-140	7.80	30	
Aroclor-1260 [2C]	0.74	0.091	mg/Kg	0.913		80.8	40-140	5.45	30	
Surrogate: Decachlorobiphenyl	*0.879*		mg/Kg	0.913		96.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.863*		mg/Kg	0.913		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.692*		mg/Kg	0.913		75.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.734*		mg/Kg	0.913		80.4	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-201

Lab Sample ID: 23H3264-01

Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.9	
	2	0.000	0.000	0.000	7.6	3.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-202

Lab Sample ID: 23H3264-02

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	8.3	
	2	0.000	0.000	0.000	8.5	2.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-203-EX

Lab Sample ID: 23H3264-03

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.53	12.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-204-R17W

Lab Sample ID: 23H3264-04 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.0	
	2	0.000	0.000	0.000	4.8	18.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-205-R17W

Lab Sample ID: 23H3264-05

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.4	
	2	0.000	0.000	0.000	8.2	10.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-206-R17W

Lab Sample ID: 23H3264-06 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	9.0	
	2	0.000	0.000	0.000	10	10.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-207-R16C

Lab Sample ID: 23H3264-07

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	16	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-208-R14SP

Lab Sample ID: 23H3264-08 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.4	7.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-209-R16SP

Lab Sample ID: 23H3264-09 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	2.1	
	2	0.000	0.000	0.000	1.7	25.6
Aroclor-1254	1	0.000	0.000	0.000	2.3	
	2	0.000	0.000	0.000	2.2	4.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-210-R16NWP

Lab Sample ID: 23H3264-10 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	25	
	2	0.000	0.000	0.000	26	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-211-R15CP

Lab Sample ID: 23H3264-11 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.59	
	2	0.000	0.000	0.000	0.57	3.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-212-R11EP

Lab Sample ID: 23H3264-12 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	15	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-213-R12CPB

Lab Sample ID: 23H3264-13

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.6	
	2	0.000	0.000	0.000	9.0	16.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-214-R12CDW

Lab Sample ID: 23H3264-14

Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.3	
	2	0.000	0.000	0.000	5.0	5.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-215-R15CPW

Lab Sample ID: 23H3264-15

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	25	
	2	0.000	0.000	0.000	25	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-216-R13CP

Lab Sample ID: 23H3264-16 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.21	4.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-217-R11SDW

Lab Sample ID: 23H3264-17 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.5	
	2	0.000	0.000	0.000	6.2	12.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-218-R13WT

Lab Sample ID: 23H3264-18 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	10	
	2	0.000	0.000	0.000	11	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-219-R14EDW

Lab Sample ID: 23H3264-19 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	6.8	
	2	0.000	0.000	0.000	6.7	1.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-220-S12C

Lab Sample ID: 23H3264-20

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	18	5.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351289-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.7	19.4
Aroclor-1260	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.6	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351289-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.5	14.3
Aroclor-1260	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.5	6.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351344-BS1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.63	3.2
Aroclor-1260	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.61	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351344-BSD1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.63	3.2
Aroclor-1260	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.61	1.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351347-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.62	
	2	0.000	0.000	0.000	0.65	4.7
Aroclor-1260	1	0.000	0.000	0.000	0.66	
	2	0.000	0.000	0.000	0.70	4.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351347-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.69	
	2	0.000	0.000	0.000	0.73	5.6
Aroclor-1260	1	0.000	0.000	0.000	0.72	
	2	0.000	0.000	0.000	0.74	2.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23H3264

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-201	8/16/2023	8:47	GRAB	O	U		1				x
2	P-202	8/16/2023	8:48	GRAB	O	U		1				x
3	P-203-Ex	8/16/2023	8:49	GRAB	O	U		1				x
4	P-204-R17W	8/16/2023	8:50	GRAB	O	U		1				x
5	P-205-R17W	8/16/2023	8:51	GRAB	O	U		1				x
6	P-206-R17W	8/16/2023	8:52	GRAB	O	U		1				x
7	P-207-R16C	8/16/2023	8:53	GRAB	O	U		1				x
8	P-208-R14CP	8/16/2023	8:54	GRAB	O	U		1				x
9	P-209-R16SP	8/16/2023	8:55	GRAB	O	U		1				x
10	P-210-R16NWP	8/16/2023	8:56	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8.22.23 1255
Received by: (signature)	Date/Time: 8.22.23 1255
Relinquished by: (signature)	Date/Time: 8.22.23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 26, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23H3264

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-211-R15CP	8/16/2023	8:57	GRAB	O	U		1				x
12	P-212-R11EP	8/16/2023	8:58	GRAB	O	U		1				x
13	P-213-R12CPB	8/16/2023	8:59	GRAB	O	U		1				x
14	P-214-R12CDW	8/16/2023	9:00	GRAB	O	U		1				x
15	P-215-R15CPW	8/16/2023	9:01	GRAB	O	U		1				x
16	P-216-R13CP	8/16/2023	9:02	GRAB	O	U		1				x
17	P-217-R11SDW	8/16/2023	9:03	GRAB	O	U		1				x
18	P-218-R13WT	8/16/2023	9:04	GRAB	O	U		1				x
19	P-219-R14EDW	8/16/2023	9:05	GRAB	O	U		1				x
20	P-220-S12C	8/16/2023	9:06	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)		Date/Time: 1258 8/22/23
Received by: (signature)		Date/Time: 1258 8-22-23
Relinquished by: (signature)		Date/Time: 1746 8-22-23
Received by: (signature)	3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature)	2.6, 5.6	Date/Time: 1746
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26, 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			1																			
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3265

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 7

23H3265-01 7

23H3265-02 8

23H3265-03 9

23H3265-04 10

23H3265-05 11

23H3265-06 12

23H3265-07 13

23H3265-08 14

23H3265-09 15

23H3265-10 16

23H3265-11 17

23H3265-12 18

23H3265-13 19

23H3265-14 20

23H3265-15 21

23H3265-16 22

23H3265-17 23

23H3265-18 24

23H3265-19 25

23H3265-20 26

Sample Preparation Information 27

QC Data 28

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 28

B351288 28

B351289 29

B351347 30

B351490 31

Dual Column RPD Report 33

Flag/Qualifier Summary 65

Certifications 66

Chain of Custody/Sample Receipt 67

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3265

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-221-R15WT	23H3265-01	Paint		SW-846 8082A	
P-222-R16NP	23H3265-02	Paint		SW-846 8082A	
P-223-S12N	23H3265-03	Paint		SW-846 8082A	
P-224-R23C	23H3265-04	Paint		SW-846 8082A	
P-225-R13S	23H3265-05	Product/Solid		SW-846 8082A	
P-226-R14SDW	23H3265-06	Paint		SW-846 8082A	
P-227-R14-EP	23H3265-07	Product/Solid		SW-846 8082A	
P-228-R12WT	23H3265-08	Paint		SW-846 8082A	
P-229-R14CDW	23H3265-09	Paint		SW-846 8082A	
P-230-R13CWP	23H3265-10	Paint		SW-846 8082A	
P-231-R11CP	23H3265-11	Product/Solid		SW-846 8082A	
P-232-R13F	23H3265-12	Product/Solid		SW-846 8082A	
P-233-R13E	23H3265-13	Paint		SW-846 8082A	
P-234-R12F	23H3265-14	Product/Solid		SW-846 8082A	
P-235-R25D	23H3265-15	Paint		SW-846 8082A	
P-236-R15S	23H3265-16	Paint		SW-846 8082A	
P-237-R33NB	23H3265-17	Paint		SW-846 8082A	
P-238-R35C	23H3265-18	Paint		SW-846 8082A	
P-239-S01F	23H3265-19	Paint		SW-846 8082A	
P-240-R13D	23H3265-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351347-MS1, B351347-MSD1

Aroclor-1016 [2C]
B351347-MS1, B351347-MSD1

Aroclor-1260
B351347-MS1, B351347-MSD1, B351490-MS1, B351490-MSD1

Aroclor-1260 [2C]
B351347-MS1, B351347-MSD1, B351490-MS1, B351490-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
23H3265-04[P-224-R23C], 23H3265-05[P-225-R13S], 23H3265-12[P-232-R13F], 23H3265-17[P-237-R33NB], B351347-MS1, B351347-MSD1, B351490-MS1, B351490-MSD1

Decachlorobiphenyl [2C]
23H3265-04[P-224-R23C], 23H3265-05[P-225-R13S], 23H3265-12[P-232-R13F], 23H3265-17[P-237-R33NB], B351347-MS1, B351347-MSD1, B351490-MS1, B351490-MSD1

Tetrachloro-m-xylene
23H3265-04[P-224-R23C], 23H3265-05[P-225-R13S], 23H3265-12[P-232-R13F], 23H3265-17[P-237-R33NB], B351347-MS1, B351347-MSD1, B351490-MS1, B351490-MSD1

Tetrachloro-m-xylene [2C]
23H3265-04[P-224-R23C], 23H3265-05[P-225-R13S], 23H3265-12[P-232-R13F], 23H3265-17[P-237-R33NB], B351347-MS1, B351347-MSD1, B351490-MS1, B351490-MSD1

Z-01

The spike recovery for this MS/MSD is not available due to dilution below the spike reporting limit required from high analyte concentration and/or matrix interferences.

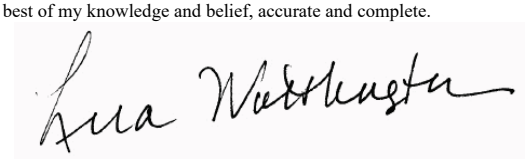
Analyte & Samples(s) Qualified:

Aroclor-1016
B351490-MS1, B351490-MSD1

Aroclor-1016 [2C]
B351490-MS1, B351490-MSD1

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-221-R15WT | Sampled: 8/16/2023 09:07

Sample ID: 23H3265-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1221 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1232 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1242 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1248 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1254 [2]	63	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1260 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1262 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG
Aroclor-1268 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.6	30-150		9/12/23 13:22
Decachlorobiphenyl [2]	96.0	30-150		9/12/23 13:22
Tetrachloro-m-xylene [1]	91.7	30-150		9/12/23 13:22
Tetrachloro-m-xylene [2]	94.6	30-150		9/12/23 13:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-222-R16NP | Sampled: 8/16/2023 09:08

Sample ID: 23H3265-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1221 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1232 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1242 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1248 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1254 [2]	16	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1260 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1262 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM
Aroclor-1268 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:28	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.8	30-150		9/12/23 12:28
Decachlorobiphenyl [2]	97.2	30-150		9/12/23 12:28
Tetrachloro-m-xylene [1]	89.1	30-150		9/12/23 12:28
Tetrachloro-m-xylene [2]	89.8	30-150		9/12/23 12:28

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-223-S12N | Sampled: 8/16/2023 09:09

Sample ID: 23H3265-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1254 [1]	64	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 12:45	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.1	30-150		9/12/23 12:45
Decachlorobiphenyl [2]	98.7	30-150		9/12/23 12:45
Tetrachloro-m-xylene [1]	91.8	30-150		9/12/23 12:45
Tetrachloro-m-xylene [2]	90.6	30-150		9/12/23 12:45

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-224-R23C | Sampled: 8/16/2023 09:10

Sample ID: 23H3265-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1221 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1232 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1242 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1248 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1254 [2]	950	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1260 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1262 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM
Aroclor-1268 [1]	ND	45	mg/Kg	100		SW-846 8082A	9/7/23	9/12/23 13:02	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 13:02
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 13:02
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 13:02
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 13:02

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-225-R13S | Sampled: 8/16/2023 09:11

Sample ID: 23H3265-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1254 [1]	4.5	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 22:46	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 22:46
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 22:46
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 22:46
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 22:46

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-226-R14SDW | Sampled: 8/16/2023 09:12

Sample ID: 23H3265-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1221 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1232 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1242 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1248 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1254 [1]	12	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1260 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1262 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM
Aroclor-1268 [1]	ND	2.1	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:19	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/12/23 13:19
Decachlorobiphenyl [2]	100	30-150		9/12/23 13:19
Tetrachloro-m-xylene [1]	93.1	30-150		9/12/23 13:19
Tetrachloro-m-xylene [2]	94.2	30-150		9/12/23 13:19

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-227-R14-EP | Sampled: 8/16/2023 09:13

Sample ID: 23H3265-07

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1221 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1232 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1242 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1248 [1]	1.8	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1254 [1]	3.0	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1260 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1262 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG
Aroclor-1268 [1]	ND	1.7	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 23:03	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	106	30-150		9/12/23 23:03
Decachlorobiphenyl [2]	97.0	30-150		9/12/23 23:03
Tetrachloro-m-xylene [1]	93.1	30-150		9/12/23 23:03
Tetrachloro-m-xylene [2]	88.9	30-150		9/12/23 23:03

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-228-R12WT | Sampled: 8/16/2023 09:14

Sample ID: 23H3265-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1221 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1232 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1242 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1248 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1254 [1]	26	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1260 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1262 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM
Aroclor-1268 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:36	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/12/23 13:36
Decachlorobiphenyl [2]	101	30-150		9/12/23 13:36
Tetrachloro-m-xylene [1]	93.4	30-150		9/12/23 13:36
Tetrachloro-m-xylene [2]	93.8	30-150		9/12/23 13:36

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-229-R14CDW | Sampled: 8/16/2023 09:51

Sample ID: 23H3265-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1221 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1232 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1242 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1248 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1254 [2]	8.9	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1260 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1262 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM
Aroclor-1268 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 13:53	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	70.9	30-150		9/12/23 13:53
Decachlorobiphenyl [2]	70.2	30-150		9/12/23 13:53
Tetrachloro-m-xylene [1]	58.6	30-150		9/12/23 13:53
Tetrachloro-m-xylene [2]	59.2	30-150		9/12/23 13:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-230-R13CWP | Sampled: 8/16/2023 09:16

Sample ID: 23H3265-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1221 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1232 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1242 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1248 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1254 [1]	4.5	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1260 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1262 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM
Aroclor-1268 [1]	ND	2.2	mg/Kg	5		SW-846 8082A	9/7/23	9/12/23 14:10	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.3	30-150		9/12/23 14:10
Decachlorobiphenyl [2]	92.6	30-150		9/12/23 14:10
Tetrachloro-m-xylene [1]	88.0	30-150		9/12/23 14:10
Tetrachloro-m-xylene [2]	90.5	30-150		9/12/23 14:10

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-231-R11CP | Sampled: 8/16/2023 09:17

Sample ID: 23H3265-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1221 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1232 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1242 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1248 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1254 [2]	1.7	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1260 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1262 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG
Aroclor-1268 [1]	ND	0.91	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:20	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.3	30-150		9/12/23 23:20
Decachlorobiphenyl [2]	77.0	30-150		9/12/23 23:20
Tetrachloro-m-xylene [1]	97.6	30-150		9/12/23 23:20
Tetrachloro-m-xylene [2]	88.5	30-150		9/12/23 23:20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-232-R13F | Sampled: 8/16/2023 09:18

Sample ID: 23H3265-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1248 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1254 [2]	27	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 23:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 23:37
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 23:37
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 23:37
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 23:37

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-233-R13E | Sampled: 8/16/2023 09:19

Sample ID: 23H3265-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1221 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1232 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1242 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1248 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1254 [1]	8.3	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1260 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1262 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM
Aroclor-1268 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:27	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	106	30-150		9/12/23 14:27
Decachlorobiphenyl [2]	105	30-150		9/12/23 14:27
Tetrachloro-m-xylene [1]	97.4	30-150		9/12/23 14:27
Tetrachloro-m-xylene [2]	98.4	30-150		9/12/23 14:27

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-234-R12F | Sampled: 8/16/2023 09:20

Sample ID: 23H3265-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1221 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1232 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1242 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1248 [1]	6.6	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1254 [2]	6.4	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1260 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1262 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG
Aroclor-1268 [1]	ND	0.94	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 23:54	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.1	30-150		9/12/23 23:54
Decachlorobiphenyl [2]	77.0	30-150		9/12/23 23:54
Tetrachloro-m-xylene [1]	94.9	30-150		9/12/23 23:54
Tetrachloro-m-xylene [2]	92.3	30-150		9/12/23 23:54

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-235-R25D | Sampled: 8/16/2023 09:21

Sample ID: 23H3265-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1221 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1232 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1242 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1248 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1254 [1]	19	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1260 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1262 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM
Aroclor-1268 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 14:44	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.0	30-150		9/12/23 14:44
Decachlorobiphenyl [2]	97.6	30-150		9/12/23 14:44
Tetrachloro-m-xylene [1]	87.4	30-150		9/12/23 14:44
Tetrachloro-m-xylene [2]	89.0	30-150		9/12/23 14:44

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-236-R15S | Sampled: 8/16/2023 09:22

Sample ID: 23H3265-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1221 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1232 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1242 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1248 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1254 [1]	59	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1260 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1262 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM
Aroclor-1268 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:01	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.9	30-150		9/12/23 15:01
Decachlorobiphenyl [2]	95.8	30-150		9/12/23 15:01
Tetrachloro-m-xylene [1]	91.4	30-150		9/12/23 15:01
Tetrachloro-m-xylene [2]	93.0	30-150		9/12/23 15:01

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-237-R33NB | Sampled: 8/16/2023 08:23

Sample ID: 23H3265-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1221 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1232 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1242 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1248 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1254 [1]	320	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1260 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1262 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM
Aroclor-1268 [1]	ND	24	mg/Kg	50		SW-846 8082A	9/8/23	9/12/23 22:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 22:56
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 22:56
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 22:56
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 22:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-238-R35C | Sampled: 8/16/2023 09:24

Sample ID: 23H3265-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1221 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1232 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1242 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1248 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1254 [1]	130	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1260 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1262 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM
Aroclor-1268 [1]	ND	9.3	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:18	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	100	30-150		9/12/23 15:18
Decachlorobiphenyl [2]	98.1	30-150		9/12/23 15:18
Tetrachloro-m-xylene [1]	92.6	30-150		9/12/23 15:18
Tetrachloro-m-xylene [2]	93.2	30-150		9/12/23 15:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-239-S01F | Sampled: 8/16/2023 09:25

Sample ID: 23H3265-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1221 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1232 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1242 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1248 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1254 [2]	110	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1260 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1262 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM
Aroclor-1268 [1]	ND	7.6	mg/Kg	20		SW-846 8082A	9/7/23	9/12/23 15:35	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		9/12/23 15:35
Decachlorobiphenyl [2]	98.6	30-150		9/12/23 15:35
Tetrachloro-m-xylene [1]	92.2	30-150		9/12/23 15:35
Tetrachloro-m-xylene [2]	91.9	30-150		9/12/23 15:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3265

Date Received: 8/22/2023

Field Sample #: P-240-R13D | Sampled: 8/16/2023 09:26

Sample ID: 23H3265-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1254 [2]	25	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 15:52	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.4	30-150		9/12/23 15:52
Decachlorobiphenyl [2]	94.8	30-150		9/12/23 15:52
Tetrachloro-m-xylene [1]	92.0	30-150		9/12/23 15:52
Tetrachloro-m-xylene [2]	92.2	30-150		9/12/23 15:52

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3265-02 [P-222-R16NP]	B351288	0.280	10.0	09/07/23
23H3265-03 [P-223-S12N]	B351288	0.213	10.0	09/07/23
23H3265-04 [P-224-R23C]	B351288	0.221	10.0	09/07/23
23H3265-06 [P-226-R14SDW]	B351288	0.236	10.0	09/07/23
23H3265-08 [P-228-R12WT]	B351288	0.246	10.0	09/07/23
23H3265-09 [P-229-R14CDW]	B351288	0.232	10.0	09/07/23
23H3265-10 [P-230-R13CWP]	B351288	0.223	10.0	09/07/23
23H3265-13 [P-233-R13E]	B351288	0.247	10.0	09/07/23
23H3265-15 [P-235-R25D]	B351288	0.223	10.0	09/07/23
23H3265-16 [P-236-R15S]	B351288	0.266	10.0	09/07/23
23H3265-18 [P-238-R35C]	B351288	0.214	10.0	09/07/23
23H3265-19 [P-239-S01F]	B351288	0.263	10.0	09/07/23
23H3265-20 [P-240-R13D]	B351288	0.258	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3265-01 [P-221-R15WT]	B351289	0.260	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3265-17 [P-237-R33NB]	B351490	0.205	10.0	09/08/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3265-05 [P-225-R13S]	B351347	2.40	10.0	09/07/23
23H3265-07 [P-227-R14-EP]	B351347	2.33	10.0	09/07/23
23H3265-11 [P-231-R11CP]	B351347	2.20	10.0	09/07/23
23H3265-12 [P-232-R13F]	B351347	2.09	10.0	09/07/23
23H3265-14 [P-234-R12F]	B351347	2.13	10.0	09/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351288 - SW-846 3540C										
Blank (B351288-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.42	mg/Kg							
Aroclor-1016 [2C]	ND	0.42	mg/Kg							
Aroclor-1221	ND	0.42	mg/Kg							
Aroclor-1221 [2C]	ND	0.42	mg/Kg							
Aroclor-1232	ND	0.42	mg/Kg							
Aroclor-1232 [2C]	ND	0.42	mg/Kg							
Aroclor-1242	ND	0.42	mg/Kg							
Aroclor-1242 [2C]	ND	0.42	mg/Kg							
Aroclor-1248	ND	0.42	mg/Kg							
Aroclor-1248 [2C]	ND	0.42	mg/Kg							
Aroclor-1254	ND	0.42	mg/Kg							
Aroclor-1254 [2C]	ND	0.42	mg/Kg							
Aroclor-1260	ND	0.42	mg/Kg							
Aroclor-1260 [2C]	ND	0.42	mg/Kg							
Aroclor-1262	ND	0.42	mg/Kg							
Aroclor-1262 [2C]	ND	0.42	mg/Kg							
Aroclor-1268	ND	0.42	mg/Kg							
Aroclor-1268 [2C]	ND	0.42	mg/Kg							
Surrogate: Decachlorobiphenyl	*6.33*		mg/Kg	8.48		74.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.30*		mg/Kg	8.48		74.3	30-150			
Surrogate: Tetrachloro-m-xylene	*5.74*		mg/Kg	8.48		67.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*5.83*		mg/Kg	8.48		68.8	30-150			
LCS (B351288-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.7	0.41	mg/Kg	2.06		84.9	40-140			
Aroclor-1016 [2C]	1.9	0.41	mg/Kg	2.06		94.2	40-140			
Aroclor-1260	1.7	0.41	mg/Kg	2.06		83.4	40-140			
Aroclor-1260 [2C]	1.7	0.41	mg/Kg	2.06		84.8	40-140			
Surrogate: Decachlorobiphenyl	*7.87*		mg/Kg	8.24		95.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.83*		mg/Kg	8.24		95.0	30-150			
Surrogate: Tetrachloro-m-xylene	*7.45*		mg/Kg	8.24		90.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.56*		mg/Kg	8.24		91.8	30-150			
LCS Dup (B351288-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.6	0.39	mg/Kg	1.94		81.0	40-140	10.7	30	
Aroclor-1016 [2C]	1.7	0.39	mg/Kg	1.94		85.2	40-140	16.1	30	
Aroclor-1260	1.4	0.39	mg/Kg	1.94		70.2	40-140	23.2	30	
Aroclor-1260 [2C]	1.4	0.39	mg/Kg	1.94		73.9	40-140	19.7	30	
Surrogate: Decachlorobiphenyl	*6.74*		mg/Kg	7.75		87.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.75*		mg/Kg	7.75		87.0	30-150			
Surrogate: Tetrachloro-m-xylene	*6.03*		mg/Kg	7.75		77.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.15*		mg/Kg	7.75		79.3	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351289 - SW-846 3540C										
Blank (B351289-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.50	mg/Kg							
Aroclor-1016 [2C]	ND	0.50	mg/Kg							
Aroclor-1221	ND	0.50	mg/Kg							
Aroclor-1221 [2C]	ND	0.50	mg/Kg							
Aroclor-1232	ND	0.50	mg/Kg							
Aroclor-1232 [2C]	ND	0.50	mg/Kg							
Aroclor-1242	ND	0.50	mg/Kg							
Aroclor-1242 [2C]	ND	0.50	mg/Kg							
Aroclor-1248	ND	0.50	mg/Kg							
Aroclor-1248 [2C]	ND	0.50	mg/Kg							
Aroclor-1254	ND	0.50	mg/Kg							
Aroclor-1254 [2C]	ND	0.50	mg/Kg							
Aroclor-1260	ND	0.50	mg/Kg							
Aroclor-1260 [2C]	ND	0.50	mg/Kg							
Aroclor-1262	ND	0.50	mg/Kg							
Aroclor-1262 [2C]	ND	0.50	mg/Kg							
Aroclor-1268	ND	0.50	mg/Kg							
Aroclor-1268 [2C]	ND	0.50	mg/Kg							
Surrogate: Decachlorobiphenyl	*6.63*		mg/Kg	9.94		66.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.57*		mg/Kg	9.94		66.1	30-150			
Surrogate: Tetrachloro-m-xylene	*5.88*		mg/Kg	9.94		59.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.55*		mg/Kg	9.94		65.9	30-150			
LCS (B351289-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.4	0.48	mg/Kg	2.41		56.9	40-140			
Aroclor-1016 [2C]	1.7	0.48	mg/Kg	2.41		70.0	40-140			
Aroclor-1260	1.5	0.48	mg/Kg	2.41		64.0	40-140			
Aroclor-1260 [2C]	1.6	0.48	mg/Kg	2.41		66.7	40-140			
Surrogate: Decachlorobiphenyl	*7.23*		mg/Kg	9.62		75.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.14*		mg/Kg	9.62		74.2	30-150			
Surrogate: Tetrachloro-m-xylene	*6.71*		mg/Kg	9.62		69.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.22*		mg/Kg	9.62		75.0	30-150			
LCS Dup (B351289-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	1.3	0.47	mg/Kg	2.37		55.9	40-140	3.49	30	
Aroclor-1016 [2C]	1.5	0.47	mg/Kg	2.37		62.3	40-140	13.3	30	
Aroclor-1260	1.4	0.47	mg/Kg	2.37		57.4	40-140	12.5	30	
Aroclor-1260 [2C]	1.5	0.47	mg/Kg	2.37		62.0	40-140	8.95	30	
Surrogate: Decachlorobiphenyl	*6.66*		mg/Kg	9.47		70.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.52*		mg/Kg	9.47		68.9	30-150			
Surrogate: Tetrachloro-m-xylene	*6.30*		mg/Kg	9.47		66.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.83*		mg/Kg	9.47		72.2	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351347 - SW-846 3540C										
Blank (B351347-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	ND	0.090	mg/Kg							
Aroclor-1016 [2C]	ND	0.090	mg/Kg							
Aroclor-1221	ND	0.090	mg/Kg							
Aroclor-1221 [2C]	ND	0.090	mg/Kg							
Aroclor-1232	ND	0.090	mg/Kg							
Aroclor-1232 [2C]	ND	0.090	mg/Kg							
Aroclor-1242	ND	0.090	mg/Kg							
Aroclor-1242 [2C]	ND	0.090	mg/Kg							
Aroclor-1248	ND	0.090	mg/Kg							
Aroclor-1248 [2C]	ND	0.090	mg/Kg							
Aroclor-1254	ND	0.090	mg/Kg							
Aroclor-1254 [2C]	ND	0.090	mg/Kg							
Aroclor-1260	ND	0.090	mg/Kg							
Aroclor-1260 [2C]	ND	0.090	mg/Kg							
Aroclor-1262	ND	0.090	mg/Kg							
Aroclor-1262 [2C]	ND	0.090	mg/Kg							
Aroclor-1268	ND	0.090	mg/Kg							
Aroclor-1268 [2C]	ND	0.090	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.947*		mg/Kg	0.905		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.921*		mg/Kg	0.905		102	30-150			
Surrogate: Tetrachloro-m-xylene	*0.801*		mg/Kg	0.905		88.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.795*		mg/Kg	0.905		87.9	30-150			
LCS (B351347-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	0.62	0.086	mg/Kg	0.862		71.8	40-140			
Aroclor-1016 [2C]	0.65	0.086	mg/Kg	0.862		75.2	40-140			
Aroclor-1260	0.66	0.086	mg/Kg	0.862		77.1	40-140			
Aroclor-1260 [2C]	0.70	0.086	mg/Kg	0.862		81.0	40-140			
Surrogate: Decachlorobiphenyl	*0.779*		mg/Kg	0.862		90.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.756*		mg/Kg	0.862		87.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.611*		mg/Kg	0.862		70.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.615*		mg/Kg	0.862		71.3	30-150			
LCS Dup (B351347-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23						
Aroclor-1016	0.69	0.091	mg/Kg	0.913		75.6	40-140	11.0	30	
Aroclor-1016 [2C]	0.73	0.091	mg/Kg	0.913		79.6	40-140	11.4	30	
Aroclor-1260	0.72	0.091	mg/Kg	0.913		78.7	40-140	7.80	30	
Aroclor-1260 [2C]	0.74	0.091	mg/Kg	0.913		80.8	40-140	5.45	30	
Surrogate: Decachlorobiphenyl	*0.879*		mg/Kg	0.913		96.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.863*		mg/Kg	0.913		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.692*		mg/Kg	0.913		75.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.734*		mg/Kg	0.913		80.4	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351347 - SW-846 3540C											
Matrix Spike (B351347-MS1)	**Source: 23H3265-05**			Prepared: 09/07/23 Analyzed: 09/13/23							
Aroclor-1016	1.3	4.4	mg/Kg	0.881	ND	**152**	*	40-140			MS-21
Aroclor-1016 [2C]	1.5	4.4	mg/Kg	0.881	ND	**172**	*	40-140			MS-21
Aroclor-1260	1.7	4.4	mg/Kg	0.881	ND	**190**	*	40-140			MS-21
Aroclor-1260 [2C]	1.7	4.4	mg/Kg	0.881	ND	**195**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	0.881			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	0.881			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	0.881			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	0.881			*	30-150			S-01
Matrix Spike Dup (B351347-MSD1)	**Source: 23H3265-05**			Prepared: 09/07/23 Analyzed: 09/13/23							
Aroclor-1016	1.1	4.1	mg/Kg	0.813	ND	140		40-140	16.1	50	MS-21
Aroclor-1016 [2C]	1.3	4.1	mg/Kg	0.813	ND	**162**	*	40-140		50	MS-21
Aroclor-1260	1.5	4.1	mg/Kg	0.813	ND	**189**	*	40-140	8.53	50	MS-21
Aroclor-1260 [2C]	1.5	4.1	mg/Kg	0.813	ND	**184**	*	40-140	14.0	50	MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	0.813			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	0.813			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	0.813			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	0.813			*	30-150			S-01
Batch B351490 - SW-846 3540C											
Blank (B351490-BLK1)				Prepared: 09/08/23 Analyzed: 09/12/23							
Aroclor-1016	ND	0.49	mg/Kg								
Aroclor-1016 [2C]	ND	0.49	mg/Kg								
Aroclor-1221	ND	0.49	mg/Kg								
Aroclor-1221 [2C]	ND	0.49	mg/Kg								
Aroclor-1232	ND	0.49	mg/Kg								
Aroclor-1232 [2C]	ND	0.49	mg/Kg								
Aroclor-1242	ND	0.49	mg/Kg								
Aroclor-1242 [2C]	ND	0.49	mg/Kg								
Aroclor-1248	ND	0.49	mg/Kg								
Aroclor-1248 [2C]	ND	0.49	mg/Kg								
Aroclor-1254	ND	0.49	mg/Kg								
Aroclor-1254 [2C]	ND	0.49	mg/Kg								
Aroclor-1260	ND	0.49	mg/Kg								
Aroclor-1260 [2C]	ND	0.49	mg/Kg								
Aroclor-1262	ND	0.49	mg/Kg								
Aroclor-1262 [2C]	ND	0.49	mg/Kg								
Aroclor-1268	ND	0.49	mg/Kg								
Aroclor-1268 [2C]	ND	0.49	mg/Kg								
Surrogate: Decachlorobiphenyl	*8.60*		mg/Kg	9.78		87.9		30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.25*		mg/Kg	9.78		84.4		30-150			
Surrogate: Tetrachloro-m-xylene	*8.01*		mg/Kg	9.78		82.0		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.26*		mg/Kg	9.78		84.5		30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351490 - SW-846 3540C											
LCS (B351490-BS1)				Prepared: 09/08/23 Analyzed: 09/12/23							
Aroclor-1016	1.6	0.44	mg/Kg	2.21		73.7		40-140			
Aroclor-1016 [2C]	1.8	0.44	mg/Kg	2.21		79.3		40-140			
Aroclor-1260	1.7	0.44	mg/Kg	2.21		75.9		40-140			
Aroclor-1260 [2C]	1.6	0.44	mg/Kg	2.21		70.9		40-140			
Surrogate: Decachlorobiphenyl	*7.45*		mg/Kg	8.82		84.4		30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.24*		mg/Kg	8.82		82.1		30-150			
Surrogate: Tetrachloro-m-xylene	*7.38*		mg/Kg	8.82		83.7		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.53*		mg/Kg	8.82		85.4		30-150			
LCS Dup (B351490-BSD1)				Prepared: 09/08/23 Analyzed: 09/12/23							
Aroclor-1016	1.4	0.38	mg/Kg	1.91		75.4		40-140	12.3	30	
Aroclor-1016 [2C]	1.5	0.38	mg/Kg	1.91		80.3		40-140	13.4	30	
Aroclor-1260	1.6	0.38	mg/Kg	1.91		81.7		40-140	7.33	30	
Aroclor-1260 [2C]	1.5	0.38	mg/Kg	1.91		80.4		40-140	2.13	30	
Surrogate: Decachlorobiphenyl	*6.22*		mg/Kg	7.62		81.6		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.01*		mg/Kg	7.62		78.9		30-150			
Surrogate: Tetrachloro-m-xylene	*5.97*		mg/Kg	7.62		78.3		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.09*		mg/Kg	7.62		79.9		30-150			
Matrix Spike (B351490-MS1)	**Source: 23H3265-17**			Prepared: 09/08/23 Analyzed: 09/12/23							
Aroclor-1016	ND	24	mg/Kg	2.45	ND		*	40-140			Z-01
Aroclor-1016 [2C]	ND	24	mg/Kg	2.45	ND		*	40-140			Z-01
Aroclor-1260	10	24	mg/Kg	2.45	ND	**409**	*	40-140			MS-21
Aroclor-1260 [2C]	15	24	mg/Kg	2.45	ND	**623**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	9.79			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	9.79			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	9.79			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	9.79			*	30-150			S-01
Matrix Spike Dup (B351490-MSD1)	**Source: 23H3265-17**			Prepared: 09/08/23 Analyzed: 09/12/23							
Aroclor-1016	ND	20	mg/Kg	1.98	ND		*	40-140	NC	50	Z-01
Aroclor-1016 [2C]	ND	20	mg/Kg	1.98	ND		*	40-140	NC	50	Z-01
Aroclor-1260	13	20	mg/Kg	1.98	ND	**669**	*	40-140	27.6	50	MS-21
Aroclor-1260 [2C]	19	20	mg/Kg	1.98	ND	**983**	*	40-140	24.1	50	MS-21
Surrogate: Decachlorobiphenyl	*0.00*		mg/Kg	7.91			*	30-150			S-01
Surrogate: Decachlorobiphenyl [2C]	*0.00*		mg/Kg	7.91			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene	*0.00*		mg/Kg	7.91			*	30-150			S-01
Surrogate: Tetrachloro-m-xylene [2C]	*0.00*		mg/Kg	7.91			*	30-150			S-01

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-221-R15WT

Lab Sample ID: 23H3265-01 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	56	
	2	0.000	0.000	0.000	63	11.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-222-R16NP

Lab Sample ID: 23H3265-02

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	15	
	2	0.000	0.000	0.000	16	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-223-S12N

Lab Sample ID: 23H3265-03 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	64	
	2	0.000	0.000	0.000	63	1.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-224-R23C

Lab Sample ID: 23H3265-04

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	900	
	2	0.000	0.000	0.000	950	5.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-225-R13S

Lab Sample ID: 23H3265-05 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.5	
	2	0.000	0.000	0.000	4.2	6.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-226-R14SDW

Lab Sample ID: 23H3265-06 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	12	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-227-R14-EP

Lab Sample ID: 23H3265-07

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.0	
	2	0.000	0.000	0.000	2.9	3.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-228-R12WT

Lab Sample ID: 23H3265-08 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	26	
	2	0.000	0.000	0.000	24	8.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-229-R14CDW

Lab Sample ID: 23H3265-09

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	8.0	
	2	0.000	0.000	0.000	8.9	10.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-230-R13CWP

Lab Sample ID: 23H3265-10

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.5	
	2	0.000	0.000	0.000	3.9	14.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-231-R11CP

Lab Sample ID: 23H3265-11

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.7	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-232-R13F

Lab Sample ID: 23H3265-12

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	26	
	2	0.000	0.000	0.000	27	3.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-233-R13E

Lab Sample ID: 23H3265-13

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	8.3	
	2	0.000	0.000	0.000	7.3	12.8

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-234-R12F

Lab Sample ID: 23H3265-14 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	6.6	
	2	0.000	0.000	0.000	5.5	18.2
Aroclor-1254	1	0.000	0.000	0.000	5.5	
	2	0.000	0.000	0.000	6.4	15.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-235-R25D

Lab Sample ID: 23H3265-15 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	17	11.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-236-R15S

Lab Sample ID: 23H3265-16 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	59	
	2	0.000	0.000	0.000	58	1.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-237-R33NB

Lab Sample ID: 23H3265-17 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	320	
	2	0.000	0.000	0.000	320	3.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-238-R35C

Lab Sample ID: 23H3265-18

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	130	
	2	0.000	0.000	0.000	120	8.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-239-S01F

Lab Sample ID: 23H3265-19 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	110	
	2	0.000	0.000	0.000	110	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-240-R13D

Lab Sample ID: 23H3265-20

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	23	
	2	0.000	0.000	0.000	25	8.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351288-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.9	5.4
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.7	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351288-BSD1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.7	6.1
Aroclor-1260	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.4	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351289-BS1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.7	19.4
Aroclor-1260	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.6	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351289-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.5	14.3
Aroclor-1260	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.5	6.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351347-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.62	
	2	0.000	0.000	0.000	0.65	4.7
Aroclor-1260	1	0.000	0.000	0.000	0.66	
	2	0.000	0.000	0.000	0.70	4.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351347-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.69	
	2	0.000	0.000	0.000	0.73	5.6
Aroclor-1260	1	0.000	0.000	0.000	0.72	
	2	0.000	0.000	0.000	0.74	2.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351347-MS1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.5	14.3
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.7	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351347-MSD1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.1	
	2	0.000	0.000	0.000	1.3	16.7
Aroclor-1260	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.5	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351490-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.8	11.8
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.6	6.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351490-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.5	6.9
Aroclor-1260	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.5	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351490-MS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1260	1	0.000	0.000	0.000	10	
	2	0.000	0.000	0.000	15	40.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351490-MSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1260	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	19	37.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
Z-01	The spike recovery for this MS/MSD is not available due to dilution below the spike reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23H3265

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-221-R15WT	8/16/2023	9:07	GRAB	O	U		1				x
2	P-222-R16NP	8/16/2023	9:08	GRAB	O	U		1				x
3	P-223-S12N	8/16/2023	9:09	GRAB	O	U		1				x
4	P-224-R23C	8/16/2023	9:10	GRAB	O	U		1				x
5	P-225-R13S	8/16/2023	9:11	GRAB	O	U		1				x
6	P-226-R14SDW	8/16/2023	9:12	GRAB	O	U		1				x
7	P-227-R14-EP	8/16/2023	9:13	GRAB	O	U		1				x
8	P-228-R12WT	8/16/2023	9:14	GRAB	O	U		1				x
9	P-229-R14CDW	8/16/2023	9:51	GRAB	O	U		1				x
10	P-230-R13CWP	8/16/2023	9:16	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: RX 8.22.23	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 2578 8.22.23	
Relinquished by: (signature)	Date/Time: 1746 8.22.23	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3265

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

ANALYSIS REQUESTED

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-231-R11CP	8/16/2023	9:17	GRAB	O	U		1				x
12	P-232-R13F	8/16/2023	9:18	GRAB	O	U		1				x
13	P-233-R13E	8/16/2023	9:19	GRAB	O	U		1				x
14	P-234-R12F	8/16/2023	9:20	GRAB	O	U		1				x
15	P-235-R25D	8/16/2023	9:21	GRAB	O	U		1				x
16	P-236-R15S	8/16/2023	9:22	GRAB	O	U		1				x
17	P-237-R33NB	8/16/2023	8:23	GRAB	O	U		3				x
18	P-238-R35C	8/16/2023	9:24	GRAB	O	U		1				x
19	P-239-S01F	8/16/2023	9:25	GRAB	O	U		1				x
20	P-240-R13D	8/16/2023	9:26	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 1255 8.22.23	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 1258 8-22-23	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8, 22, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26, 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics											VOA Vials						Other / Fill in				
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			100mL	1 Liter		500mL		250mL																
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact				
1			—																													
2			—																													
3			—																													
4			—																													
5			—																													
6			—																													
7			—																													
8			—																													
9			—																													
10			—																													
11			—																													
12			—																													
13			—																													
14			—																													
15			—																													
16			—	1																												
17		3																														
18		—																														
19		—																														
20		—																														

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 12, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3267

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3267-01 6

23H3267-02 7

23H3267-03 8

23H3267-04 9

23H3267-05 10

23H3267-06 11

23H3267-07 12

23H3267-08 13

23H3267-09 14

23H3267-10 15

23H3267-11 16

23H3267-12 17

23H3267-13 18

23H3267-14 19

23H3267-15 20

23H3267-16 21

23H3267-17 22

23H3267-18 23

23H3267-19 24

23H3267-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351287 27

B351288 28

B351289 29

Dual Column RPD Report 31

Flag/Qualifier Summary 63

Certifications 64

Chain of Custody/Sample Receipt 65

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/12/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3267

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-241-R37C	23H3267-01	Paint		SW-846 8082A	
P-242-R12-CP	23H3267-02	Paint		SW-846 8082A	
P-243-R12NDW	23H3267-03	Paint		SW-846 8082A	
P-244-R12EDW	23H3267-04	Paint		SW-846 8082A	
P-245-R35S	23H3267-05	Paint		SW-846 8082A	
P-246-R36C	23H3267-06	Paint		SW-846 8082A	
P-247-R12NP	23H3267-07	Paint		SW-846 8082A	
P-248-R11WT	23H3267-08	Paint		SW-846 8082A	
P-249-R14WP	23H3267-09	Paint		SW-846 8082A	
P-250-R11D	23H3267-10	Paint		SW-846 8082A	
P-251-R12EW	23H3267-11	Paint		SW-846 8082A	
P-252-R17S	23H3267-12	Paint		SW-846 8082A	
P-253-R15D	23H3267-13	Paint		SW-846 8082A	
P-254-R11CDW	23H3267-14	Paint		SW-846 8082A	
P-255-R14SP	23H3267-15	Paint		SW-846 8082A	
P-256-R24D	23H3267-16	Paint		SW-846 8082A	
P-257-S12S	23H3267-17	Paint		SW-846 8082A	
P-258-R11WDW	23H3267-18	Paint		SW-846 8082A	
P-259-R15E	23H3267-19	Paint		SW-846 8082A	
P-260-R34E	23H3267-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351287-MS1, B351287-MSD1, B351288-MS1, B351288-MSD1, B351289-MS1, B351289-MSD1

Aroclor-1016 [2C]
B351287-MS1, B351287-MSD1, B351288-MS1, B351288-MSD1, B351289-MS1, B351289-MSD1

Aroclor-1260
B351287-MS1, B351287-MSD1, B351288-MS1, B351288-MSD1, B351289-MS1, B351289-MSD1

Aroclor-1260 [2C]
B351287-MS1, B351287-MSD1, B351288-MS1, B351288-MSD1, B351289-MS1, B351289-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

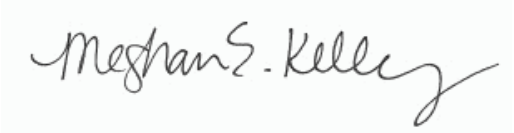
Decachlorobiphenyl
23H3267-05[P-245-R35S], 23H3267-06[P-246-R36C], 23H3267-20[P-260-R34E]

Decachlorobiphenyl [2C]
23H3267-05[P-245-R35S], 23H3267-06[P-246-R36C], 23H3267-20[P-260-R34E]

Tetrachloro-m-xylene
23H3267-05[P-245-R35S], 23H3267-06[P-246-R36C], 23H3267-20[P-260-R34E]

Tetrachloro-m-xylene [2C]
23H3267-05[P-245-R35S], 23H3267-06[P-246-R36C], 23H3267-20[P-260-R34E]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-241-R37C | Sampled: 8/16/2023 09:27

Sample ID: 23H3267-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1221 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1232 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1242 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1248 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1254 [1]	65	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1260 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1262 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG
Aroclor-1268 [1]	ND	3.5	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 10:38	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.4	30-150		9/10/23 10:38
Decachlorobiphenyl [2]	81.1	30-150		9/10/23 10:38
Tetrachloro-m-xylene [1]	73.6	30-150		9/10/23 10:38
Tetrachloro-m-xylene [2]	74.7	30-150		9/10/23 10:38

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-242-R12-CP | Sampled: 8/16/2023 09:28

Sample ID: 23H3267-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1221 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1232 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1242 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1248 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1254 [1]	0.66	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1260 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1262 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG
Aroclor-1268 [1]	ND	0.37	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 10:56	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.7	30-150		9/10/23 10:56
Decachlorobiphenyl [2]	86.8	30-150		9/10/23 10:56
Tetrachloro-m-xylene [1]	84.8	30-150		9/10/23 10:56
Tetrachloro-m-xylene [2]	85.9	30-150		9/10/23 10:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-243-R12NDW | Sampled: 8/16/2023 09:29

Sample ID: 23H3267-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1221 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1232 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1242 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1248 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1254 [2]	6.6	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1260 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1262 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG
Aroclor-1268 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 11:13	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.4	30-150		9/10/23 11:13
Decachlorobiphenyl [2]	85.5	30-150		9/10/23 11:13
Tetrachloro-m-xylene [1]	85.9	30-150		9/10/23 11:13
Tetrachloro-m-xylene [2]	84.8	30-150		9/10/23 11:13

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-244-R12EDW | Sampled: 8/16/2023 09:30

Sample ID: 23H3267-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1221 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1232 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1242 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1248 [1]	2.5	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1254 [2]	3.0	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1260 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1262 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG
Aroclor-1268 [1]	ND	0.45	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 11:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.5	30-150		9/10/23 11:31
Decachlorobiphenyl [2]	84.9	30-150		9/10/23 11:31
Tetrachloro-m-xylene [1]	84.6	30-150		9/10/23 11:31
Tetrachloro-m-xylene [2]	85.8	30-150		9/10/23 11:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-245-R35S | Sampled: 8/16/2023 09:31

Sample ID: 23H3267-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1221 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1232 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1242 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1248 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1254 [1]	220	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1260 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1262 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG
Aroclor-1268 [1]	ND	25	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 11:48	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/10/23 11:48
Decachlorobiphenyl [2]	*	30-150	S-01	9/10/23 11:48
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/10/23 11:48
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/10/23 11:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-246-R36C | Sampled: 8/16/2023 09:32

Sample ID: 23H3267-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1221 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1232 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1242 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1248 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1254 [1]	130	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1260 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1262 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG
Aroclor-1268 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/10/23 12:06	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/10/23 12:06
Decachlorobiphenyl [2]	*	30-150	S-01	9/10/23 12:06
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/10/23 12:06
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/10/23 12:06

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-247-R12NP | Sampled: 8/16/2023 09:33

Sample ID: 23H3267-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1221 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1232 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1242 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1248 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1254 [2]	2.4	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1260 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1262 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG
Aroclor-1268 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:23	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.9	30-150		9/10/23 12:23
Decachlorobiphenyl [2]	82.6	30-150		9/10/23 12:23
Tetrachloro-m-xylene [1]	82.2	30-150		9/10/23 12:23
Tetrachloro-m-xylene [2]	84.3	30-150		9/10/23 12:23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-248-R11WT | Sampled: 8/16/2023 09:34

Sample ID: 23H3267-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1254 [2]	33	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 12:41	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.2	30-150		9/10/23 12:41
Decachlorobiphenyl [2]	89.2	30-150		9/10/23 12:41
Tetrachloro-m-xylene [1]	84.7	30-150		9/10/23 12:41
Tetrachloro-m-xylene [2]	86.6	30-150		9/10/23 12:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-249-R14WP | Sampled: 8/16/2023 09:35

Sample ID: 23H3267-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1221 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1232 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1242 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1248 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1254 [2]	1.5	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1260 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1262 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG
Aroclor-1268 [1]	ND	0.43	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 12:58	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.5	30-150		9/10/23 12:58
Decachlorobiphenyl [2]	83.0	30-150		9/10/23 12:58
Tetrachloro-m-xylene [1]	82.8	30-150		9/10/23 12:58
Tetrachloro-m-xylene [2]	85.7	30-150		9/10/23 12:58

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-250-R11D | Sampled: 8/16/2023 09:36

Sample ID: 23H3267-10

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1254 [2]	50	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 13:15	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.4	30-150		9/10/23 13:15
Decachlorobiphenyl [2]	93.2	30-150		9/10/23 13:15
Tetrachloro-m-xylene [1]	90.6	30-150		9/10/23 13:15
Tetrachloro-m-xylene [2]	91.9	30-150		9/10/23 13:15

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-251-R12EW | Sampled: 8/16/2023 09:37

Sample ID: 23H3267-11

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1221 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1232 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1242 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1248 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1254 [2]	10	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1260 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1262 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG
Aroclor-1268 [1]	ND	2.3	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.8	30-150		9/10/23 14:37
Decachlorobiphenyl [2]	88.7	30-150		9/10/23 14:37
Tetrachloro-m-xylene [1]	85.7	30-150		9/10/23 14:37
Tetrachloro-m-xylene [2]	84.1	30-150		9/10/23 14:37

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-252-R17S | Sampled: 8/16/2023 09:38

Sample ID: 23H3267-12

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1221 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1232 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1242 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1248 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1254 [1]	12	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1260 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1262 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG
Aroclor-1268 [1]	ND	1.9	mg/Kg	5		SW-846 8082A	9/7/23	9/10/23 14:55	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	104	30-150		9/10/23 14:55
Decachlorobiphenyl [2]	97.9	30-150		9/10/23 14:55
Tetrachloro-m-xylene [1]	88.1	30-150		9/10/23 14:55
Tetrachloro-m-xylene [2]	87.3	30-150		9/10/23 14:55

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-253-R15D | Sampled: 8/16/2023 09:39

Sample ID: 23H3267-13

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1254 [2]	32	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:12	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.2	30-150		9/10/23 15:12
Decachlorobiphenyl [2]	87.5	30-150		9/10/23 15:12
Tetrachloro-m-xylene [1]	80.7	30-150		9/10/23 15:12
Tetrachloro-m-xylene [2]	80.6	30-150		9/10/23 15:12

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-254-R11CDW | Sampled: 8/16/2023 09:40

Sample ID: 23H3267-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1221 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1232 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1242 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1248 [1]	3.7	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1254 [2]	3.4	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1260 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1262 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG
Aroclor-1268 [1]	ND	0.50	mg/Kg	1		SW-846 8082A	9/7/23	9/10/23 15:30	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.0	30-150		9/10/23 15:30
Decachlorobiphenyl [2]	85.1	30-150		9/10/23 15:30
Tetrachloro-m-xylene [1]	83.9	30-150		9/10/23 15:30
Tetrachloro-m-xylene [2]	85.2	30-150		9/10/23 15:30

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-255-R14SP | Sampled: 8/16/2023 09:41

Sample ID: 23H3267-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1221 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1232 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1242 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1248 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1254 [2]	5.3	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1260 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1262 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG
Aroclor-1268 [1]	ND	4.2	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 15:47	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.5	30-150		9/10/23 15:47
Decachlorobiphenyl [2]	91.9	30-150		9/10/23 15:47
Tetrachloro-m-xylene [1]	84.0	30-150		9/10/23 15:47
Tetrachloro-m-xylene [2]	85.1	30-150		9/10/23 15:47

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-256-R24D | Sampled: 8/14/2023 09:42

Sample ID: 23H3267-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1248 [1]	33	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1254 [1]	27	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:04	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.6	30-150		9/10/23 16:04
Decachlorobiphenyl [2]	84.6	30-150		9/10/23 16:04
Tetrachloro-m-xylene [1]	79.4	30-150		9/10/23 16:04
Tetrachloro-m-xylene [2]	79.8	30-150		9/10/23 16:04

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-257-S12S | Sampled: 8/16/2023 09:43

Sample ID: 23H3267-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1221 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1232 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1242 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1248 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1254 [2]	55	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1260 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1262 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG
Aroclor-1268 [1]	ND	4.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.5	30-150		9/10/23 16:22
Decachlorobiphenyl [2]	86.3	30-150		9/10/23 16:22
Tetrachloro-m-xylene [1]	72.8	30-150		9/10/23 16:22
Tetrachloro-m-xylene [2]	75.1	30-150		9/10/23 16:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-258-R11WDW | Sampled: 8/16/2023 09:44

Sample ID: 23H3267-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1254 [2]	15	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 13:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.7	30-150		9/12/23 13:39
Decachlorobiphenyl [2]	98.2	30-150		9/12/23 13:39
Tetrachloro-m-xylene [1]	91.3	30-150		9/12/23 13:39
Tetrachloro-m-xylene [2]	97.2	30-150		9/12/23 13:39

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-259-R15E | Sampled: 8/16/2023 12:00

Sample ID: 23H3267-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1221 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1232 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1242 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1248 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1254 [2]	56	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1260 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1262 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG
Aroclor-1268 [1]	ND	4.5	mg/Kg	10		SW-846 8082A	9/7/23	9/12/23 10:17	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.6	30-150		9/12/23 10:17
Decachlorobiphenyl [2]	89.7	30-150		9/12/23 10:17
Tetrachloro-m-xylene [1]	84.0	30-150		9/12/23 10:17
Tetrachloro-m-xylene [2]	84.7	30-150		9/12/23 10:17

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3267

Date Received: 8/22/2023

Field Sample #: P-260-R34E | Sampled: 8/16/2023 09:46

Sample ID: 23H3267-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1221 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1232 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1242 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1248 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1254 [1]	200	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1260 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1262 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG
Aroclor-1268 [1]	ND	20	mg/Kg	50		SW-846 8082A	9/7/23	9/12/23 10:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/12/23 10:34
Decachlorobiphenyl [2]	*	30-150	S-01	9/12/23 10:34
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/12/23 10:34
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/12/23 10:34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3267-01 [P-241-R37C]	B351287	0.288	10.0	09/07/23
23H3267-02 [P-242-R12-CP]	B351287	0.267	10.0	09/07/23
23H3267-03 [P-243-R12NDW]	B351287	0.217	10.0	09/07/23
23H3267-04 [P-244-R12EDW]	B351287	0.221	10.0	09/07/23
23H3267-05 [P-245-R35S]	B351287	0.202	10.0	09/07/23
23H3267-06 [P-246-R36C]	B351287	0.237	10.0	09/07/23
23H3267-07 [P-247-R12NP]	B351287	0.237	10.0	09/07/23
23H3267-08 [P-248-R11WT]	B351287	0.236	10.0	09/07/23
23H3267-09 [P-249-R14WP]	B351287	0.232	10.0	09/07/23
23H3267-10 [P-250-R11D]	B351287	0.212	10.0	09/07/23
23H3267-11 [P-251-R12EW]	B351287	0.219	10.0	09/07/23
23H3267-12 [P-252-R17S]	B351287	0.266	10.0	09/07/23
23H3267-13 [P-253-R15D]	B351287	0.228	10.0	09/07/23
23H3267-14 [P-254-R11CDW]	B351287	0.200	10.0	09/07/23
23H3267-15 [P-255-R14SP]	B351287	0.235	10.0	09/07/23
23H3267-16 [P-256-R24D]	B351287	0.226	10.0	09/07/23
23H3267-17 [P-257-S12S]	B351287	0.219	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3267-19 [P-259-R15E]	B351288	0.225	10.0	09/07/23
23H3267-20 [P-260-R34E]	B351288	0.247	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3267-18 [P-258-R11WDW]	B351289	0.254	10.0	09/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351287 - SW-846 3540C										
Blank (B351287-BLK1)				Prepared: 09/07/23 Analyzed: 09/10/23						
Aroclor-1016	ND	0.050	mg/Kg							
Aroclor-1016 [2C]	ND	0.050	mg/Kg							
Aroclor-1221	ND	0.050	mg/Kg							
Aroclor-1221 [2C]	ND	0.050	mg/Kg							
Aroclor-1232	ND	0.050	mg/Kg							
Aroclor-1232 [2C]	ND	0.050	mg/Kg							
Aroclor-1242	ND	0.050	mg/Kg							
Aroclor-1242 [2C]	ND	0.050	mg/Kg							
Aroclor-1248	ND	0.050	mg/Kg							
Aroclor-1248 [2C]	ND	0.050	mg/Kg							
Aroclor-1254	ND	0.050	mg/Kg							
Aroclor-1254 [2C]	ND	0.050	mg/Kg							
Aroclor-1260	ND	0.050	mg/Kg							
Aroclor-1260 [2C]	ND	0.050	mg/Kg							
Aroclor-1262	ND	0.050	mg/Kg							
Aroclor-1262 [2C]	ND	0.050	mg/Kg							
Aroclor-1268	ND	0.050	mg/Kg							
Aroclor-1268 [2C]	ND	0.050	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.878*		mg/Kg	1.00		87.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.807*		mg/Kg	1.00		80.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.839*		mg/Kg	1.00		83.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.832*		mg/Kg	1.00		83.2	30-150			
LCS (B351287-BS1)				Prepared: 09/07/23 Analyzed: 09/10/23						
Aroclor-1016	0.18	0.050	mg/Kg	0.250		73.3	40-140			
Aroclor-1016 [2C]	0.19	0.050	mg/Kg	0.250		77.8	40-140			
Aroclor-1260	0.20	0.050	mg/Kg	0.250		79.3	40-140			
Aroclor-1260 [2C]	0.19	0.050	mg/Kg	0.250		74.5	40-140			
Surrogate: Decachlorobiphenyl	*0.908*		mg/Kg	1.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.875*		mg/Kg	1.00		87.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.858*		mg/Kg	1.00		85.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.858*		mg/Kg	1.00		85.8	30-150			
LCS Dup (B351287-BSD1)				Prepared: 09/07/23 Analyzed: 09/10/23						
Aroclor-1016	0.19	0.050	mg/Kg	0.250		77.3	40-140	5.37	30	
Aroclor-1016 [2C]	0.19	0.050	mg/Kg	0.250		77.4	40-140	0.461	30	
Aroclor-1260	0.20	0.050	mg/Kg	0.250		80.4	40-140	1.32	30	
Aroclor-1260 [2C]	0.19	0.050	mg/Kg	0.250		76.6	40-140	2.86	30	
Surrogate: Decachlorobiphenyl	*0.884*		mg/Kg	1.00		88.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.842*		mg/Kg	1.00		84.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.829*		mg/Kg	1.00		82.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.830*		mg/Kg	1.00		83.0	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351287 - SW-846 3540C											
Matrix Spike (B351287-MS1)	**Source: 23H3267-17**			Prepared: 09/07/23 Analyzed: 09/10/23							
Aroclor-1016	13	3.7	mg/Kg	1.87	ND	**707**	*	40-140			MS-21
Aroclor-1016 [2C]	25	3.7	mg/Kg	1.87	ND	**1320**	*	40-140			MS-21
Aroclor-1260	12	3.7	mg/Kg	1.87	ND	**618**	*	40-140			MS-21
Aroclor-1260 [2C]	11	3.7	mg/Kg	1.87	ND	**594**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*7.14*		mg/Kg	7.49		95.3		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.81*		mg/Kg	7.49		91.0		30-150			
Surrogate: Tetrachloro-m-xylene	*6.51*		mg/Kg	7.49		87.0		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.54*		mg/Kg	7.49		87.3		30-150			
Matrix Spike Dup (B351287-MSD1)	**Source: 23H3267-17**			Prepared: 09/07/23 Analyzed: 09/10/23							
Aroclor-1016	14	3.6	mg/Kg	1.79	ND	**782**	*	40-140	5.76	50	MS-21
Aroclor-1016 [2C]	26	3.6	mg/Kg	1.79	ND	**1460**	*	40-140	5.88	50	MS-21
Aroclor-1260	13	3.6	mg/Kg	1.79	ND	**713**	*	40-140	10.1	50	MS-21
Aroclor-1260 [2C]	12	3.6	mg/Kg	1.79	ND	**678**	*	40-140	8.99	50	MS-21
Surrogate: Decachlorobiphenyl	*6.96*		mg/Kg	7.18		97.1		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.61*		mg/Kg	7.18		92.2		30-150			
Surrogate: Tetrachloro-m-xylene	*6.52*		mg/Kg	7.18		90.9		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.48*		mg/Kg	7.18		90.2		30-150			
Batch B351288 - SW-846 3540C											
Blank (B351288-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	ND	0.42	mg/Kg								
Aroclor-1016 [2C]	ND	0.42	mg/Kg								
Aroclor-1221	ND	0.42	mg/Kg								
Aroclor-1221 [2C]	ND	0.42	mg/Kg								
Aroclor-1232	ND	0.42	mg/Kg								
Aroclor-1232 [2C]	ND	0.42	mg/Kg								
Aroclor-1242	ND	0.42	mg/Kg								
Aroclor-1242 [2C]	ND	0.42	mg/Kg								
Aroclor-1248	ND	0.42	mg/Kg								
Aroclor-1248 [2C]	ND	0.42	mg/Kg								
Aroclor-1254	ND	0.42	mg/Kg								
Aroclor-1254 [2C]	ND	0.42	mg/Kg								
Aroclor-1260	ND	0.42	mg/Kg								
Aroclor-1260 [2C]	ND	0.42	mg/Kg								
Aroclor-1262	ND	0.42	mg/Kg								
Aroclor-1262 [2C]	ND	0.42	mg/Kg								
Aroclor-1268	ND	0.42	mg/Kg								
Aroclor-1268 [2C]	ND	0.42	mg/Kg								
Surrogate: Decachlorobiphenyl	*6.33*		mg/Kg	8.48		74.7		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.30*		mg/Kg	8.48		74.3		30-150			
Surrogate: Tetrachloro-m-xylene	*5.74*		mg/Kg	8.48		67.7		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*5.83*		mg/Kg	8.48		68.8		30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351288 - SW-846 3540C											
LCS (B351288-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	1.7	0.41	mg/Kg	2.06		84.9		40-140			
Aroclor-1016 [2C]	1.9	0.41	mg/Kg	2.06		94.2		40-140			
Aroclor-1260	1.7	0.41	mg/Kg	2.06		83.4		40-140			
Aroclor-1260 [2C]	1.7	0.41	mg/Kg	2.06		84.8		40-140			
Surrogate: Decachlorobiphenyl	*7.87*		mg/Kg	8.24		95.6		30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.83*		mg/Kg	8.24		95.0		30-150			
Surrogate: Tetrachloro-m-xylene	*7.45*		mg/Kg	8.24		90.4		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.56*		mg/Kg	8.24		91.8		30-150			
LCS Dup (B351288-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	1.6	0.39	mg/Kg	1.94		81.0		40-140	10.7	30	
Aroclor-1016 [2C]	1.7	0.39	mg/Kg	1.94		85.2		40-140	16.1	30	
Aroclor-1260	1.4	0.39	mg/Kg	1.94		70.2		40-140	23.2	30	
Aroclor-1260 [2C]	1.4	0.39	mg/Kg	1.94		73.9		40-140	19.7	30	
Surrogate: Decachlorobiphenyl	*6.74*		mg/Kg	7.75		87.0		30-150			
Surrogate: Decachlorobiphenyl [2C]	*6.75*		mg/Kg	7.75		87.0		30-150			
Surrogate: Tetrachloro-m-xylene	*6.03*		mg/Kg	7.75		77.8		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*6.15*		mg/Kg	7.75		79.3		30-150			
Matrix Spike (B351288-MS1)	**Source: 23H3267-19**			Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	21	4.9	mg/Kg	2.47	ND	**864**	*	40-140			MS-21
Aroclor-1016 [2C]	35	4.9	mg/Kg	2.47	ND	**1400**	*	40-140			MS-21
Aroclor-1260	16	4.9	mg/Kg	2.47	ND	**650**	*	40-140			MS-21
Aroclor-1260 [2C]	15	4.9	mg/Kg	2.47	ND	**595**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*8.75*		mg/Kg	9.86		88.8		30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.74*		mg/Kg	9.86		88.7		30-150			
Surrogate: Tetrachloro-m-xylene	*8.02*		mg/Kg	9.86		81.4		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.11*		mg/Kg	9.86		82.2		30-150			
Matrix Spike Dup (B351288-MSD1)	**Source: 23H3267-19**			Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	17	4.0	mg/Kg	1.98	ND	**842**	*	40-140	24.3	50	MS-21
Aroclor-1016 [2C]	27	4.0	mg/Kg	1.98	ND	**1370**	*	40-140	23.8	50	MS-21
Aroclor-1260	13	4.0	mg/Kg	1.98	ND	**680**	*	40-140	17.4	50	MS-21
Aroclor-1260 [2C]	12	4.0	mg/Kg	1.98	ND	**614**	*	40-140	18.8	50	MS-21
Surrogate: Decachlorobiphenyl	*7.32*		mg/Kg	7.92		92.3		30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.28*		mg/Kg	7.92		91.9		30-150			
Surrogate: Tetrachloro-m-xylene	*6.92*		mg/Kg	7.92		87.3		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.06*		mg/Kg	7.92		89.0		30-150			
Batch B351289 - SW-846 3540C											
Blank (B351289-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23							
Aroclor-1016	ND	0.50	mg/Kg								
Aroclor-1016 [2C]	ND	0.50	mg/Kg								
Aroclor-1221	ND	0.50	mg/Kg								
Aroclor-1221 [2C]	ND	0.50	mg/Kg								
Aroclor-1232	ND	0.50	mg/Kg								
Aroclor-1232 [2C]	ND	0.50	mg/Kg								
Aroclor-1242	ND	0.50	mg/Kg								
Aroclor-1242 [2C]	ND	0.50	mg/Kg								
Aroclor-1248	ND	0.50	mg/Kg								
Aroclor-1248 [2C]	ND	0.50	mg/Kg								
Aroclor-1254	ND	0.50	mg/Kg								

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD		RPD Limit	Notes
Batch B351289 - SW-846 3540C												
Blank (B351289-BLK1)				Prepared: 09/07/23 Analyzed: 09/12/23								
Aroclor-1254 [2C]	ND	0.50	mg/Kg									
Aroclor-1260	ND	0.50	mg/Kg									
Aroclor-1260 [2C]	ND	0.50	mg/Kg									
Aroclor-1262	ND	0.50	mg/Kg									
Aroclor-1262 [2C]	ND	0.50	mg/Kg									
Aroclor-1268	ND	0.50	mg/Kg									
Aroclor-1268 [2C]	ND	0.50	mg/Kg									
Surrogate: Decachlorobiphenyl	*6.63*		mg/Kg	9.94		66.7		30-150				
Surrogate: Decachlorobiphenyl [2C]	*6.57*		mg/Kg	9.94		66.1		30-150				
Surrogate: Tetrachloro-m-xylene	*5.88*		mg/Kg	9.94		59.1		30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*6.55*		mg/Kg	9.94		65.9		30-150				
LCS (B351289-BS1)				Prepared: 09/07/23 Analyzed: 09/12/23								
Aroclor-1016	1.4	0.48	mg/Kg	2.41		56.9		40-140				
Aroclor-1016 [2C]	1.7	0.48	mg/Kg	2.41		70.0		40-140				
Aroclor-1260	1.5	0.48	mg/Kg	2.41		64.0		40-140				
Aroclor-1260 [2C]	1.6	0.48	mg/Kg	2.41		66.7		40-140				
Surrogate: Decachlorobiphenyl	*7.23*		mg/Kg	9.62		75.2		30-150				
Surrogate: Decachlorobiphenyl [2C]	*7.14*		mg/Kg	9.62		74.2		30-150				
Surrogate: Tetrachloro-m-xylene	*6.71*		mg/Kg	9.62		69.7		30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*7.22*		mg/Kg	9.62		75.0		30-150				
LCS Dup (B351289-BSD1)				Prepared: 09/07/23 Analyzed: 09/12/23								
Aroclor-1016	1.3	0.47	mg/Kg	2.37		55.9		40-140	3.49		30	
Aroclor-1016 [2C]	1.5	0.47	mg/Kg	2.37		62.3		40-140	13.3		30	
Aroclor-1260	1.4	0.47	mg/Kg	2.37		57.4		40-140	12.5		30	
Aroclor-1260 [2C]	1.5	0.47	mg/Kg	2.37		62.0		40-140	8.95		30	
Surrogate: Decachlorobiphenyl	*6.66*		mg/Kg	9.47		70.4		30-150				
Surrogate: Decachlorobiphenyl [2C]	*6.52*		mg/Kg	9.47		68.9		30-150				
Surrogate: Tetrachloro-m-xylene	*6.30*		mg/Kg	9.47		66.5		30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*6.83*		mg/Kg	9.47		72.2		30-150				
Matrix Spike (B351289-MS1)	**Source: 23H3267-18**			Prepared: 09/07/23 Analyzed: 09/12/23								
Aroclor-1016	8.7	4.5	mg/Kg	2.24	ND	**390**	*	40-140				MS-21
Aroclor-1016 [2C]	15	4.5	mg/Kg	2.24	ND	**686**	*	40-140				MS-21
Aroclor-1260	8.2	4.5	mg/Kg	2.24	ND	**364**	*	40-140				MS-21
Aroclor-1260 [2C]	8.0	4.5	mg/Kg	2.24	ND	**357**	*	40-140				MS-21
Surrogate: Decachlorobiphenyl	*7.46*		mg/Kg	8.96		83.2		30-150				
Surrogate: Decachlorobiphenyl [2C]	*7.38*		mg/Kg	8.96		82.3		30-150				
Surrogate: Tetrachloro-m-xylene	*6.00*		mg/Kg	8.96		67.0		30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*6.65*		mg/Kg	8.96		74.2		30-150				
Matrix Spike Dup (B351289-MSD1)	**Source: 23H3267-18**			Prepared: 09/07/23 Analyzed: 09/12/23								
Aroclor-1016	5.1	3.7	mg/Kg	1.87	ND	**271**	*	40-140	**53.1**	*	50	MS-21
Aroclor-1016 [2C]	8.9	3.7	mg/Kg	1.87	ND	**472**	*	40-140	**53.9**	*	50	MS-21
Aroclor-1260	4.1	3.7	mg/Kg	1.87	ND	**216**	*	40-140	**67.1**	*	50	MS-21
Aroclor-1260 [2C]	4.4	3.7	mg/Kg	1.87	ND	**232**	*	40-140	**59.1**	*	50	MS-21
Surrogate: Decachlorobiphenyl	*7.12*		mg/Kg	7.50		95.0		30-150				
Surrogate: Decachlorobiphenyl [2C]	*6.92*		mg/Kg	7.50		92.3		30-150				
Surrogate: Tetrachloro-m-xylene	*6.07*		mg/Kg	7.50		81.0		30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*6.52*		mg/Kg	7.50		86.9		30-150				

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-241-R37C

Lab Sample ID: 23H3267-01 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	65	
	2	0.000	0.000	0.000	62	4.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-242-R12-CP

Lab Sample ID: 23H3267-02

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.66	
	2	0.000	0.000	0.000	0.64	3.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-243-R12NDW

Lab Sample ID: 23H3267-03 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.8	
	2	0.000	0.000	0.000	6.6	12.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-244-R12EDW

Lab Sample ID: 23H3267-04 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	2.5	
	2	0.000	0.000	0.000	2.4	4.1
Aroclor-1254	1	0.000	0.000	0.000	2.8	
	2	0.000	0.000	0.000	3.0	6.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-245-R35S

Lab Sample ID: 23H3267-05 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	220	
	2	0.000	0.000	0.000	220	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-246-R36C

Lab Sample ID: 23H3267-06

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	130	
	2	0.000	0.000	0.000	120	8.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-247-R12NP

Lab Sample ID: 23H3267-07 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.3	
	2	0.000	0.000	0.000	2.4	4.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-248-R11WT

Lab Sample ID: 23H3267-08 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	30	
	2	0.000	0.000	0.000	33	9.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-249-R14WP

Lab Sample ID: 23H3267-09 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.2	
	2	0.000	0.000	0.000	1.5	22.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-250-R11D

Lab Sample ID: 23H3267-10

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	49	
	2	0.000	0.000	0.000	50	2.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-251-R12EW

Lab Sample ID: 23H3267-11 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	9.4	
	2	0.000	0.000	0.000	10	6.2

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-252-R17S

Lab Sample ID: 23H3267-12 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	10	18.2

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-253-R15D

Lab Sample ID: 23H3267-13

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	28	
	2	0.000	0.000	0.000	32	13.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-254-R11CDW

Lab Sample ID: 23H3267-14

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	3.7	
	2	0.000	0.000	0.000	2.6	34.9
Aroclor-1254	1	0.000	0.000	0.000	2.5	
	2	0.000	0.000	0.000	3.4	26.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-255-R14SP

Lab Sample ID: 23H3267-15 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.6	
	2	0.000	0.000	0.000	5.3	14.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-256-R24D

Lab Sample ID: 23H3267-16 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	33	
	2	0.000	0.000	0.000	25	27.6
Aroclor-1254	1	0.000	0.000	0.000	27	
	2	0.000	0.000	0.000	27	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-257-S12S

Lab Sample ID: 23H3267-17

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	53	
	2	0.000	0.000	0.000	55	3.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-258-R11WDW

Lab Sample ID: 23H3267-18 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	14	
	2	0.000	0.000	0.000	15	6.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-259-R15E

Lab Sample ID: 23H3267-19

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	55	
	2	0.000	0.000	0.000	56	1.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-260-R34E

Lab Sample ID: 23H3267-20

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	200	
	2	0.000	0.000	0.000	190	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351287-BS1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.19	5.4
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.19	5.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351287-BSD1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.19	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.19	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351287-MS1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	25	63.2
Aroclor-1260	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	11	8.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351287-MSD1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	14	
	2	0.000	0.000	0.000	26	60.0
Aroclor-1260	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	12	8.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351288-BS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.9	5.4
Aroclor-1260	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	1.7	0.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351288-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.7	6.1
Aroclor-1260	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.4	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351288-MS1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	21	
	2	0.000	0.000	0.000	35	50.0
Aroclor-1260	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	15	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351288-MSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	17	
	2	0.000	0.000	0.000	27	45.5
Aroclor-1260	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	12	15.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351289-BS1

Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.7	19.4
Aroclor-1260	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.6	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351289-BSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.5	14.3
Aroclor-1260	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.5	6.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351289-MS1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	8.7	
	2	0.000	0.000	0.000	15	52.1
Aroclor-1260	1	0.000	0.000	0.000	8.2	
	2	0.000	0.000	0.000	8.0	2.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351289-MSD1 Date(s) Analyzed: 09/12/2023 09/12/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	5.1	
	2	0.000	0.000	0.000	8.9	54.3
Aroclor-1260	1	0.000	0.000	0.000	4.1	
	2	0.000	0.000	0.000	4.4	7.1

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires

23173267

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	P-241-R37C	8/16/2023	9:27	GRAB	O	U		1			
2	P-242-R12-CP	8/16/2023	9:28	GRAB	O	U		1			
3	P-243-R12NDW	8/16/2023	9:29	GRAB	O	U		1			
4	P-244-R12EDW	8/16/2023	9:30	GRAB	O	U		1			
5	P-245-R35S	8/16/2023	9:31	GRAB	O	U		1			
6	P-246-R36C	8/16/2023	9:32	GRAB	O	U		1			
7	P-247-R12NP	8/16/2023	9:33	GRAB	O	U		1			
8	P-248-R11WT	8/16/2023	9:34	GRAB	O	U		1			
9	P-249-R14WP	8/16/2023	9:35	GRAB	O	U		1			
10	P-250-R11D	8/16/2023	9:36	GRAB	O	U		1			

PCBs 8082 Soxhlet Extraction

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8.22.23 1258	
Received by: (signature)	Date/Time: 8.22.23 1258	
Relinquished by: (signature)	Date/Time: 8.22.23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Comments:**

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

RF

23H3267

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-251-R12EW	8/16/2023	9:37	GRAB	O	U		1				x
12	P-252-R17S	8/16/2023	9:38	GRAB	O	U		1				x
13	P-253-R15D	8/16/2023	9:39	GRAB	O	U		1				x
14	P-254-R11CDW	8/16/2023	9:40	GRAB	O	U		1				x
15	P-255-R14SP	8/16/2023	9:41	GRAB	O	U		1				x
16	P-256-R24D	8/14/2023	9:42	GRAB	O	U		1				x
17	P-257-S12S	8/16/2023	9:43	GRAB	O	U		3				x
18	P-258-R11WDW	8/16/2023	9:44	GRAB	O	U		3				x
19	P-259-R15E	8/16/2023	12:00	GRAB	O	U		3				x
20	P-260-R34E	8/16/2023	9:46	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 1258 8.22.23
Received by: (signature) TimPACE	Date/Time: 1258 8.22.23
Relinquished by: (signature) TimPACE	Date/Time: 1746 8.22.23
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26, 38, 39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Quaitrax ID: 120836

Sample	Soils Jars (Circle Amb/Clear)			Ambers					Plastics												VOA Vials				Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter		500mL		250mL															
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact				
1			1																											
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														
13																														
14																														
15																														
16			1																											
17			3																											
18			3																											
19			3																											
20			1																											

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 18, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3268

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23H3268-01 6

23H3268-02 7

23H3268-03 8

23H3268-04 9

23H3268-05 10

23H3268-06 11

23H3268-07 12

23H3268-08 13

23H3268-09 14

23H3268-10 15

23H3268-11 16

23H3268-12 17

23H3268-13 18

23H3268-14 19

23H3268-15 20

23H3268-16 21

23H3268-17 22

23H3268-18 23

23H3268-19 24

23H3268-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B351285 27

B351287 28

B351344 29

B351930 30

Dual Column RPD Report 32

Flag/Qualifier Summary 59

Certifications 60

Chain of Custody/Sample Receipt 62

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/18/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3268

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-261-R34S	23H3268-01	Paint		SW-846 8082A	
P-262-EX	23H3268-02	Paint		SW-846 8082A	
P-263-EX	23H3268-03	Paint		SW-846 8082A	
P-264-EX	23H3268-04	Paint		SW-846 8082A	
P-265-R17EC1	23H3268-05	Paint		SW-846 8082A	
P-266-R17EC2	23H3268-06	Paint		SW-846 8082A	
P-267-R17EC3	23H3268-07	Paint		SW-846 8082A	
P-268-R17EC4	23H3268-08	Paint		SW-846 8082A	
P-269-R23SS	23H3268-09	Product/Solid		SW-846 8082A	
P-270-R27SS	23H3268-10	Product/Solid		SW-846 8082A	
P-271-R25ASS	23H3268-11	Product/Solid		SW-846 8082A	
P-272-R21SS	23H3268-12	Product/Solid		SW-846 8082A	
P-273-R31SS	23H3268-13	Product/Solid		SW-846 8082A	
P-274-S12R	23H3268-14	Paint		SW-846 8082A	
P-FD-01	23H3268-15	Paint		SW-846 8082A	
P-FD-02	23H3268-16	Paint		SW-846 8082A	
P-FD-03	23H3268-17	Paint		SW-846 8082A	
P-FD-04	23H3268-18	Paint		SW-846 8082A	
P-FD-05	23H3268-19	Paint		SW-846 8082A	
P-FD-06	23H3268-20	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B351285-MS1, B351285-MSD1

Aroclor-1016 [2C]
B351285-MS1, B351285-MSD1

Aroclor-1260
B351285-MS1, B351285-MSD1

Aroclor-1260 [2C]
B351285-MS1, B351285-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

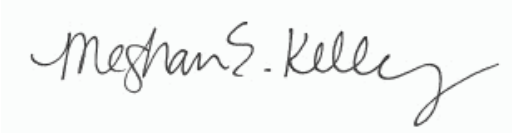
Decachlorobiphenyl
23H3268-19[P-FD-05]

Decachlorobiphenyl [2C]
23H3268-19[P-FD-05]

Tetrachloro-m-xylene
23H3268-19[P-FD-05]

Tetrachloro-m-xylene [2C]
23H3268-19[P-FD-05]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-261-R34S | Sampled: 8/16/2023 09:47

Sample ID: 23H3268-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1221 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1232 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1242 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1248 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1254 [2]	32	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1260 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1262 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG
Aroclor-1268 [1]	ND	4.4	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:39	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.6	30-150		9/10/23 16:39
Decachlorobiphenyl [2]	87.3	30-150		9/10/23 16:39
Tetrachloro-m-xylene [1]	79.5	30-150		9/10/23 16:39
Tetrachloro-m-xylene [2]	81.4	30-150		9/10/23 16:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-262-EX | Sampled: 8/16/2023 09:48

Sample ID: 23H3268-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1221 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1232 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1242 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1248 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1254 [1]	70	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1260 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1262 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG
Aroclor-1268 [1]	ND	3.6	mg/Kg	10		SW-846 8082A	9/7/23	9/10/23 16:57	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.0	30-150		9/10/23 16:57
Decachlorobiphenyl [2]	93.2	30-150		9/10/23 16:57
Tetrachloro-m-xylene [1]	90.1	30-150		9/10/23 16:57
Tetrachloro-m-xylene [2]	92.6	30-150		9/10/23 16:57

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-263-EX | Sampled: 8/16/2023 09:49

Sample ID: 23H3268-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1221 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1232 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1242 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1248 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1254 [1]	160	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1260 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1262 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG
Aroclor-1268 [1]	ND	8.7	mg/Kg	20		SW-846 8082A	9/7/23	9/10/23 17:14	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.5	30-150		9/10/23 17:14
Decachlorobiphenyl [2]	94.1	30-150		9/10/23 17:14
Tetrachloro-m-xylene [1]	89.9	30-150		9/10/23 17:14
Tetrachloro-m-xylene [2]	91.3	30-150		9/10/23 17:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-264-EX | Sampled: 8/16/2023 09:50

Sample ID: 23H3268-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1221 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1232 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1242 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1248 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1254 [1]	180	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1260 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1262 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG
Aroclor-1268 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 14:01	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.3	30-150		9/9/23 14:01
Decachlorobiphenyl [2]	91.1	30-150		9/9/23 14:01
Tetrachloro-m-xylene [1]	96.9	30-150		9/9/23 14:01
Tetrachloro-m-xylene [2]	94.9	30-150		9/9/23 14:01

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-265-R17EC1 | Sampled: 8/16/2023 09:51

Sample ID: 23H3268-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1221 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1232 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1242 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1248 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1254 [2]	6.3	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1260 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1262 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG
Aroclor-1268 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:18	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.8	30-150		9/9/23 14:18
Decachlorobiphenyl [2]	83.2	30-150		9/9/23 14:18
Tetrachloro-m-xylene [1]	86.9	30-150		9/9/23 14:18
Tetrachloro-m-xylene [2]	86.4	30-150		9/9/23 14:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-266-R17EC2 | Sampled: 8/16/2023 09:52

Sample ID: 23H3268-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1221 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1232 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1242 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1248 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1254 [2]	5.3	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1260 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1262 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG
Aroclor-1268 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:36	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.0	30-150		9/9/23 14:36
Decachlorobiphenyl [2]	78.4	30-150		9/9/23 14:36
Tetrachloro-m-xylene [1]	84.9	30-150		9/9/23 14:36
Tetrachloro-m-xylene [2]	84.3	30-150		9/9/23 14:36

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-267-R17EC3 | Sampled: 8/16/2023 09:53

Sample ID: 23H3268-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1221 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1232 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1242 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1248 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1254 [2]	2.9	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1260 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1262 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG
Aroclor-1268 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 14:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	46.6	30-150		9/9/23 14:53
Decachlorobiphenyl [2]	44.6	30-150		9/9/23 14:53
Tetrachloro-m-xylene [1]	46.3	30-150		9/9/23 14:53
Tetrachloro-m-xylene [2]	45.7	30-150		9/9/23 14:53

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-268-R17EC4 | Sampled: 8/16/2023 09:54

Sample ID: 23H3268-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1221 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1232 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1242 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1248 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1254 [2]	3.1	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1260 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1262 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG
Aroclor-1268 [1]	ND	0.42	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 15:10	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.3	30-150		9/9/23 15:10
Decachlorobiphenyl [2]	75.3	30-150		9/9/23 15:10
Tetrachloro-m-xylene [1]	76.5	30-150		9/9/23 15:10
Tetrachloro-m-xylene [2]	76.1	30-150		9/9/23 15:10

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-269-R23SS | Sampled: 8/17/2023 09:55

Sample ID: 23H3268-09

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:16	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	60.6	30-150		9/13/23 11:16
Decachlorobiphenyl [2]	59.7	30-150		9/13/23 11:16
Tetrachloro-m-xylene [1]	61.1	30-150		9/13/23 11:16
Tetrachloro-m-xylene [2]	61.7	30-150		9/13/23 11:16

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-270-R27SS | Sampled: 8/17/2023 10:20

Sample ID: 23H3268-10

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 11:33	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	54.7	30-150		9/13/23 11:33
Decachlorobiphenyl [2]	53.8	30-150		9/13/23 11:33
Tetrachloro-m-xylene [1]	52.0	30-150		9/13/23 11:33
Tetrachloro-m-xylene [2]	52.5	30-150		9/13/23 11:33

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-271-R25ASS | Sampled: 8/17/2023 10:45

Sample ID: 23H3268-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/14/23	9/18/23 13:18	JEA

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.0	30-150		9/18/23 13:18
Decachlorobiphenyl [2]	84.4	30-150		9/18/23 13:18
Tetrachloro-m-xylene [1]	82.2	30-150		9/18/23 13:18
Tetrachloro-m-xylene [2]	87.0	30-150		9/18/23 13:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-272-R21SS | Sampled: 8/17/2023 11:20

Sample ID: 23H3268-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:07	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.7	30-150		9/13/23 12:07
Decachlorobiphenyl [2]	87.4	30-150		9/13/23 12:07
Tetrachloro-m-xylene [1]	85.1	30-150		9/13/23 12:07
Tetrachloro-m-xylene [2]	87.0	30-150		9/13/23 12:07

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-273-R31SS | Sampled: 8/17/2023 11:45

Sample ID: 23H3268-13

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 12:24	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.6	30-150		9/13/23 12:24
Decachlorobiphenyl [2]	91.5	30-150		9/13/23 12:24
Tetrachloro-m-xylene [1]	85.6	30-150		9/13/23 12:24
Tetrachloro-m-xylene [2]	87.4	30-150		9/13/23 12:24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-274-S12R | Sampled: 8/16/2023 09:55

Sample ID: 23H3268-14

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1221 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1232 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1242 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1248 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1254 [2]	50	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1260 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1262 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG
Aroclor-1268 [1]	ND	3.9	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:28	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.6	30-150		9/9/23 15:28
Decachlorobiphenyl [2]	93.4	30-150		9/9/23 15:28
Tetrachloro-m-xylene [1]	92.4	30-150		9/9/23 15:28
Tetrachloro-m-xylene [2]	92.6	30-150		9/9/23 15:28

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-FD-01 | Sampled: 8/14/2023 08:00

Sample ID: 23H3268-15

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1221 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1232 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1242 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1248 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1254 [2]	21	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1260 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1262 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG
Aroclor-1268 [1]	ND	3.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 15:45	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/9/23 15:45
Decachlorobiphenyl [2]	97.8	30-150		9/9/23 15:45
Tetrachloro-m-xylene [1]	96.8	30-150		9/9/23 15:45
Tetrachloro-m-xylene [2]	95.2	30-150		9/9/23 15:45

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-FD-02 | Sampled: 8/14/2023 08:01

Sample ID: 23H3268-16

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1221 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1232 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1242 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1248 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1254 [2]	19	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1260 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1262 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG
Aroclor-1268 [1]	ND	3.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 16:03	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	104	30-150		9/9/23 16:03
Decachlorobiphenyl [2]	97.9	30-150		9/9/23 16:03
Tetrachloro-m-xylene [1]	93.4	30-150		9/9/23 16:03
Tetrachloro-m-xylene [2]	92.2	30-150		9/9/23 16:03

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-FD-03 | Sampled: 8/14/2023 08:02

Sample ID: 23H3268-17

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1221 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1232 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1242 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1248 [1]	68	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1254 [2]	44	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1260 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1262 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG
Aroclor-1268 [1]	ND	4.8	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 19:00	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	102	30-150		9/9/23 19:00
Decachlorobiphenyl [2]	95.5	30-150		9/9/23 19:00
Tetrachloro-m-xylene [1]	95.9	30-150		9/9/23 19:00
Tetrachloro-m-xylene [2]	92.9	30-150		9/9/23 19:00

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-FD-04 | Sampled: 8/14/2023 08:03

Sample ID: 23H3268-18

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1221 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1232 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1242 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1248 [1]	4.7	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1254 [2]	5.6	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1260 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1262 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG
Aroclor-1268 [1]	ND	0.38	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:18	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.7	30-150		9/9/23 19:18
Decachlorobiphenyl [2]	69.9	30-150		9/9/23 19:18
Tetrachloro-m-xylene [1]	66.8	30-150		9/9/23 19:18
Tetrachloro-m-xylene [2]	66.4	30-150		9/9/23 19:18

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-FD-05 | Sampled: 8/15/2023 08:00

Sample ID: 23H3268-19

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1221 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1232 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1242 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1248 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1254 [1]	340	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1260 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1262 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG
Aroclor-1268 [1]	ND	21	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 19:35	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/9/23 19:35
Decachlorobiphenyl [2]	*	30-150	S-01	9/9/23 19:35
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/9/23 19:35
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/9/23 19:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3268

Date Received: 8/22/2023

Field Sample #: P-FD-06 | Sampled: 8/15/2023 08:01

Sample ID: 23H3268-20

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1221 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1232 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1242 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1248 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1254 [2]	5.6	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1260 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1262 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG
Aroclor-1268 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 19:53	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.4	30-150		9/9/23 19:53
Decachlorobiphenyl [2]	82.5	30-150		9/9/23 19:53
Tetrachloro-m-xylene [1]	89.8	30-150		9/9/23 19:53
Tetrachloro-m-xylene [2]	89.1	30-150		9/9/23 19:53

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3268-04 [P-264-EX]	B351285	0.244	10.0	09/07/23
23H3268-05 [P-265-R17EC1]	B351285	0.226	10.0	09/07/23
23H3268-06 [P-266-R17EC2]	B351285	0.226	10.0	09/07/23
23H3268-07 [P-267-R17EC3]	B351285	0.260	10.0	09/07/23
23H3268-08 [P-268-R17EC4]	B351285	0.237	10.0	09/07/23
23H3268-14 [P-274-S12R]	B351285	0.260	10.0	09/07/23
23H3268-15 [P-FD-01]	B351285	0.266	10.0	09/07/23
23H3268-16 [P-FD-02]	B351285	0.273	10.0	09/07/23
23H3268-17 [P-FD-03]	B351285	0.210	10.0	09/07/23
23H3268-18 [P-FD-04]	B351285	0.262	10.0	09/07/23
23H3268-19 [P-FD-05]	B351285	0.233	10.0	09/07/23
23H3268-20 [P-FD-06]	B351285	0.253	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3268-01 [P-261-R34S]	B351287	0.229	10.0	09/07/23
23H3268-02 [P-262-EX]	B351287	0.279	10.0	09/07/23
23H3268-03 [P-263-EX]	B351287	0.229	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3268-09 [P-269-R23SS]	B351344	2.00	10.0	09/07/23
23H3268-10 [P-270-R27SS]	B351344	2.00	10.0	09/07/23
23H3268-12 [P-272-R21SS]	B351344	2.00	10.0	09/07/23
23H3268-13 [P-273-R31SS]	B351344	2.00	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3268-11RE1 [P-271-R25ASS]	B351930	2.00	10.0	09/14/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351285 - SW-846 3540C										
Blank (B351285-BLK1)				Prepared: 09/07/23 Analyzed: 09/09/23						
Aroclor-1016	ND	0.50	mg/Kg							
Aroclor-1016 [2C]	ND	0.50	mg/Kg							
Aroclor-1221	ND	0.50	mg/Kg							
Aroclor-1221 [2C]	ND	0.50	mg/Kg							
Aroclor-1232	ND	0.50	mg/Kg							
Aroclor-1232 [2C]	ND	0.50	mg/Kg							
Aroclor-1242	ND	0.50	mg/Kg							
Aroclor-1242 [2C]	ND	0.50	mg/Kg							
Aroclor-1248	ND	0.50	mg/Kg							
Aroclor-1248 [2C]	ND	0.50	mg/Kg							
Aroclor-1254	ND	0.50	mg/Kg							
Aroclor-1254 [2C]	ND	0.50	mg/Kg							
Aroclor-1260	ND	0.50	mg/Kg							
Aroclor-1260 [2C]	ND	0.50	mg/Kg							
Aroclor-1262	ND	0.50	mg/Kg							
Aroclor-1262 [2C]	ND	0.50	mg/Kg							
Aroclor-1268	ND	0.50	mg/Kg							
Aroclor-1268 [2C]	ND	0.50	mg/Kg							
Surrogate: Decachlorobiphenyl	*9.47*		mg/Kg	10.0		94.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.72*		mg/Kg	10.0		87.2	30-150			
Surrogate: Tetrachloro-m-xylene	*9.18*		mg/Kg	10.0		91.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.99*		mg/Kg	10.0		89.9	30-150			
LCS (B351285-BS1)				Prepared: 09/07/23 Analyzed: 09/09/23						
Aroclor-1016	2.0	0.50	mg/Kg	2.50		80.0	40-140			
Aroclor-1016 [2C]	2.0	0.50	mg/Kg	2.50		80.5	40-140			
Aroclor-1260	1.9	0.50	mg/Kg	2.50		76.6	40-140			
Aroclor-1260 [2C]	1.8	0.50	mg/Kg	2.50		73.9	40-140			
Surrogate: Decachlorobiphenyl	*9.41*		mg/Kg	10.0		94.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.91*		mg/Kg	10.0		89.1	30-150			
Surrogate: Tetrachloro-m-xylene	*8.61*		mg/Kg	10.0		86.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.44*		mg/Kg	10.0		84.4	30-150			
LCS Dup (B351285-BSD1)				Prepared: 09/07/23 Analyzed: 09/09/23						
Aroclor-1016	2.0	0.50	mg/Kg	2.50		78.5	40-140	1.81	30	
Aroclor-1016 [2C]	1.9	0.50	mg/Kg	2.50		75.6	40-140	6.37	30	
Aroclor-1260	1.9	0.50	mg/Kg	2.50		75.4	40-140	1.67	30	
Aroclor-1260 [2C]	1.9	0.50	mg/Kg	2.50		76.4	40-140	3.32	30	
Surrogate: Decachlorobiphenyl	*9.11*		mg/Kg	10.0		91.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.65*		mg/Kg	10.0		86.5	30-150			
Surrogate: Tetrachloro-m-xylene	*8.56*		mg/Kg	10.0		85.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.36*		mg/Kg	10.0		83.6	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B351285 - SW-846 3540C											
Matrix Spike (B351285-MS1)	**Source: 23H3268-04**			Prepared: 09/07/23 Analyzed: 09/09/23							
Aroclor-1016	19	4.6	mg/Kg	2.31	ND	**831**	*	40-140			MS-21
Aroclor-1016 [2C]	42	4.6	mg/Kg	2.31	ND	**1800**	*	40-140			MS-21
Aroclor-1260	43	4.6	mg/Kg	2.31	ND	**1860**	*	40-140			MS-21
Aroclor-1260 [2C]	40	4.6	mg/Kg	2.31	ND	**1730**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*9.44*		mg/Kg	9.23		102		30-150			
Surrogate: Decachlorobiphenyl [2C]	*9.00*		mg/Kg	9.23		97.5		30-150			
Surrogate: Tetrachloro-m-xylene	*8.81*		mg/Kg	9.23		95.4		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.77*		mg/Kg	9.23		95.0		30-150			
Matrix Spike Dup (B351285-MSD1)	**Source: 23H3268-04**			Prepared: 09/07/23 Analyzed: 09/09/23							
Aroclor-1016	23	4.6	mg/Kg	2.29	ND	**1020**	*	40-140	19.3	50	MS-21
Aroclor-1016 [2C]	52	4.6	mg/Kg	2.29	ND	**2250**	*	40-140	21.7	50	MS-21
Aroclor-1260	59	4.6	mg/Kg	2.29	ND	**2570**	*	40-140	31.6	50	MS-21
Aroclor-1260 [2C]	55	4.6	mg/Kg	2.29	ND	**2380**	*	40-140	31.3	50	MS-21
Surrogate: Decachlorobiphenyl	*8.14*		mg/Kg	9.17		88.7		30-150			
Surrogate: Decachlorobiphenyl [2C]	*7.76*		mg/Kg	9.17		84.6		30-150			
Surrogate: Tetrachloro-m-xylene	*7.57*		mg/Kg	9.17		82.5		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*7.59*		mg/Kg	9.17		82.7		30-150			
Batch B351287 - SW-846 3540C											
Blank (B351287-BLK1)				Prepared: 09/07/23 Analyzed: 09/10/23							
Aroclor-1016	ND	0.050	mg/Kg								
Aroclor-1016 [2C]	ND	0.050	mg/Kg								
Aroclor-1221	ND	0.050	mg/Kg								
Aroclor-1221 [2C]	ND	0.050	mg/Kg								
Aroclor-1232	ND	0.050	mg/Kg								
Aroclor-1232 [2C]	ND	0.050	mg/Kg								
Aroclor-1242	ND	0.050	mg/Kg								
Aroclor-1242 [2C]	ND	0.050	mg/Kg								
Aroclor-1248	ND	0.050	mg/Kg								
Aroclor-1248 [2C]	ND	0.050	mg/Kg								
Aroclor-1254	ND	0.050	mg/Kg								
Aroclor-1254 [2C]	ND	0.050	mg/Kg								
Aroclor-1260	ND	0.050	mg/Kg								
Aroclor-1260 [2C]	ND	0.050	mg/Kg								
Aroclor-1262	ND	0.050	mg/Kg								
Aroclor-1262 [2C]	ND	0.050	mg/Kg								
Aroclor-1268	ND	0.050	mg/Kg								
Aroclor-1268 [2C]	ND	0.050	mg/Kg								
Surrogate: Decachlorobiphenyl	*0.878*		mg/Kg	1.00		87.8		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.807*		mg/Kg	1.00		80.7		30-150			
Surrogate: Tetrachloro-m-xylene	*0.839*		mg/Kg	1.00		83.9		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.832*		mg/Kg	1.00		83.2		30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351287 - SW-846 3540C										
LCS (B351287-BS1)				Prepared: 09/07/23 Analyzed: 09/10/23						
Aroclor-1016	0.18	0.050	mg/Kg	0.250		73.3	40-140			
Aroclor-1016 [2C]	0.19	0.050	mg/Kg	0.250		77.8	40-140			
Aroclor-1260	0.20	0.050	mg/Kg	0.250		79.3	40-140			
Aroclor-1260 [2C]	0.19	0.050	mg/Kg	0.250		74.5	40-140			
Surrogate: Decachlorobiphenyl	*0.908*		mg/Kg	1.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.875*		mg/Kg	1.00		87.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.858*		mg/Kg	1.00		85.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.858*		mg/Kg	1.00		85.8	30-150			
LCS Dup (B351287-BSD1)				Prepared: 09/07/23 Analyzed: 09/10/23						
Aroclor-1016	0.19	0.050	mg/Kg	0.250		77.3	40-140	5.37	30	
Aroclor-1016 [2C]	0.19	0.050	mg/Kg	0.250		77.4	40-140	0.461	30	
Aroclor-1260	0.20	0.050	mg/Kg	0.250		80.4	40-140	1.32	30	
Aroclor-1260 [2C]	0.19	0.050	mg/Kg	0.250		76.6	40-140	2.86	30	
Surrogate: Decachlorobiphenyl	*0.884*		mg/Kg	1.00		88.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.842*		mg/Kg	1.00		84.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.829*		mg/Kg	1.00		82.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.830*		mg/Kg	1.00		83.0	30-150			
Batch B351344 - SW-846 3540C										
Blank (B351344-BLK1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.829*		mg/Kg	1.00		82.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.826*		mg/Kg	1.00		82.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.785*		mg/Kg	1.00		78.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.789*		mg/Kg	1.00		78.9	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351344 - SW-846 3540C										
LCS (B351344-BS1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.61	0.10	mg/Kg	1.00		60.8	40-140			
Aroclor-1016 [2C]	0.63	0.10	mg/Kg	1.00		63.3	40-140			
Aroclor-1260	0.61	0.10	mg/Kg	1.00		60.5	40-140			
Aroclor-1260 [2C]	0.61	0.10	mg/Kg	1.00		61.2	40-140			
Surrogate: Decachlorobiphenyl	*0.767*		mg/Kg	1.00		76.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.770*		mg/Kg	1.00		77.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.684*		mg/Kg	1.00		68.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.688*		mg/Kg	1.00		68.8	30-150			
LCS Dup (B351344-BSD1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.61	0.10	mg/Kg	1.00		60.9	40-140	0.214	30	
Aroclor-1016 [2C]	0.63	0.10	mg/Kg	1.00		63.2	40-140	0.179	30	
Aroclor-1260	0.60	0.10	mg/Kg	1.00		60.0	40-140	0.905	30	
Aroclor-1260 [2C]	0.61	0.10	mg/Kg	1.00		60.8	40-140	0.605	30	
Surrogate: Decachlorobiphenyl	*0.792*		mg/Kg	1.00		79.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.790*		mg/Kg	1.00		79.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.708*		mg/Kg	1.00		70.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.714*		mg/Kg	1.00		71.4	30-150			
Matrix Spike (B351344-MS1)		**Source: 23H3268-10**		Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.74	0.10	mg/Kg	1.00	ND	73.8	40-140			
Aroclor-1016 [2C]	0.79	0.10	mg/Kg	1.00	ND	78.5	40-140			
Aroclor-1260	0.73	0.10	mg/Kg	1.00	ND	73.3	40-140			
Aroclor-1260 [2C]	0.78	0.10	mg/Kg	1.00	ND	78.1	40-140			
Surrogate: Decachlorobiphenyl	*0.940*		mg/Kg	1.00		94.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.926*		mg/Kg	1.00		92.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.890*		mg/Kg	1.00		89.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.894*		mg/Kg	1.00		89.4	30-150			
Matrix Spike Dup (B351344-MSD1)		**Source: 23H3268-10**		Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.79	0.10	mg/Kg	1.00	ND	78.9	40-140	6.79	50	
Aroclor-1016 [2C]	0.81	0.10	mg/Kg	1.00	ND	80.6	40-140	2.64	50	
Aroclor-1260	0.75	0.10	mg/Kg	1.00	ND	74.7	40-140	1.92	50	
Aroclor-1260 [2C]	0.83	0.10	mg/Kg	1.00	ND	82.9	40-140	5.92	50	
Surrogate: Decachlorobiphenyl	*0.958*		mg/Kg	1.00		95.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.949*		mg/Kg	1.00		94.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.910*		mg/Kg	1.00		91.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.910*		mg/Kg	1.00		91.0	30-150			
Batch B351930 - SW-846 3540C										
Blank (B351930-BLK1)				Prepared: 09/14/23 Analyzed: 09/15/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351930 - SW-846 3540C										
Blank (B351930-BLK1)				Prepared: 09/14/23 Analyzed: 09/15/23						
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.944*		mg/Kg	1.00		94.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.937*		mg/Kg	1.00		93.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.853*		mg/Kg	1.00		85.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.866*		mg/Kg	1.00		86.6	30-150			
LCS (B351930-BS1)				Prepared: 09/14/23 Analyzed: 09/15/23						
Aroclor-1016	0.71	0.097	mg/Kg	0.971		72.8	40-140			
Aroclor-1016 [2C]	0.78	0.097	mg/Kg	0.971		80.6	40-140			
Aroclor-1260	0.72	0.097	mg/Kg	0.971		73.7	40-140			
Aroclor-1260 [2C]	0.75	0.097	mg/Kg	0.971		77.4	40-140			
Surrogate: Decachlorobiphenyl	*0.961*		mg/Kg	0.971		99.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.963*		mg/Kg	0.971		99.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.860*		mg/Kg	0.971		88.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.880*		mg/Kg	0.971		90.6	30-150			
LCS Dup (B351930-BSD1)				Prepared: 09/14/23 Analyzed: 09/15/23						
Aroclor-1016	0.70	0.099	mg/Kg	0.990		70.3	40-140	1.51	30	
Aroclor-1016 [2C]	0.80	0.099	mg/Kg	0.990		81.3	40-140	2.81	30	
Aroclor-1260	0.73	0.099	mg/Kg	0.990		73.8	40-140	2.11	30	
Aroclor-1260 [2C]	0.76	0.099	mg/Kg	0.990		76.9	40-140	1.31	30	
Surrogate: Decachlorobiphenyl	*0.955*		mg/Kg	0.990		96.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.955*		mg/Kg	0.990		96.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.864*		mg/Kg	0.990		87.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.881*		mg/Kg	0.990		88.9	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-261-R34S

Lab Sample ID: 23H3268-01 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	31	
	2	0.000	0.000	0.000	32	3.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-262-EX

Lab Sample ID: 23H3268-02 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	70	
	2	0.000	0.000	0.000	67	4.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-263-EX

Lab Sample ID: 23H3268-03

Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	160	
	2	0.000	0.000	0.000	160	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-264-EX

Lab Sample ID: 23H3268-04 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	180	
	2	0.000	0.000	0.000	170	5.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-265-R17EC1

Lab Sample ID: 23H3268-05 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.9	
	2	0.000	0.000	0.000	6.3	6.6

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-266-R17EC2

Lab Sample ID: 23H3268-06 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.9	
	2	0.000	0.000	0.000	5.3	30.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-267-R17EC3

Lab Sample ID: 23H3268-07 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.6	
	2	0.000	0.000	0.000	2.9	10.9

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-268-R17EC4

Lab Sample ID: 23H3268-08 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.6	
	2	0.000	0.000	0.000	3.1	17.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-274-S12R

Lab Sample ID: 23H3268-14

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	49	
	2	0.000	0.000	0.000	50	2.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-01

Lab Sample ID: 23H3268-15 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	21	27.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-02

Lab Sample ID: 23H3268-16

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	16	
	2	0.000	0.000	0.000	19	17.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-03

Lab Sample ID: 23H3268-17

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	68	
	2	0.000	0.000	0.000	51	28.6
Aroclor-1254	1	0.000	0.000	0.000	44	
	2	0.000	0.000	0.000	44	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-04

Lab Sample ID: 23H3268-18

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	4.7	
	2	0.000	0.000	0.000	3.7	23.8
Aroclor-1254	1	0.000	0.000	0.000	5.2	
	2	0.000	0.000	0.000	5.6	7.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-05

Lab Sample ID: 23H3268-19

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	340	
	2	0.000	0.000	0.000	320	6.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-06

Lab Sample ID: 23H3268-20

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.5	
	2	0.000	0.000	0.000	5.6	21.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351285-BS1

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	2.0	0.0
Aroclor-1260	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.8	5.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351285-BSD1 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	1.9	5.1
Aroclor-1260	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.9	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351285-MS1 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	19	
	2	0.000	0.000	0.000	42	75.4
Aroclor-1260	1	0.000	0.000	0.000	43	
	2	0.000	0.000	0.000	40	7.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351285-MSD1 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	23	
	2	0.000	0.000	0.000	52	77.3
Aroclor-1260	1	0.000	0.000	0.000	59	
	2	0.000	0.000	0.000	55	7.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351287-BS1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.19	5.4
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.19	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351287-BSD1 Date(s) Analyzed: 09/10/2023 09/10/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.19	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.19	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351344-BS1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.63	3.2
Aroclor-1260	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.61	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351344-BSD1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.63	3.2
Aroclor-1260	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.61	1.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B351344-MS1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.74	
	2	0.000	0.000	0.000	0.79	6.5
Aroclor-1260	1	0.000	0.000	0.000	0.73	
	2	0.000	0.000	0.000	0.78	6.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B351344-MSD1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.79	
	2	0.000	0.000	0.000	0.81	2.5
Aroclor-1260	1	0.000	0.000	0.000	0.75	
	2	0.000	0.000	0.000	0.83	10.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351930-BS1 Date(s) Analyzed: 09/15/2023 09/15/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.71	
	2	0.000	0.000	0.000	0.78	9.4
Aroclor-1260	1	0.000	0.000	0.000	0.72	
	2	0.000	0.000	0.000	0.75	4.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351930-BSD1 Date(s) Analyzed: 09/15/2023 09/15/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.70	
	2	0.000	0.000	0.000	0.80	13.3
Aroclor-1260	1	0.000	0.000	0.000	0.73	
	2	0.000	0.000	0.000	0.76	4.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23H3268

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-261-R34S	8/16/2023	9:47	GRAB	O	U		1				x
2	P-262-Ex	8/16/2023	9:48	GRAB	O	U		1				x
3	P-263-Ex	8/16/2023	9:49	GRAB	O	U		1				x
4	P-264-Ex	8/16/2023	9:50	GRAB	O	U		3				x
5	P-265-R17EC1	8/16/2023	9:51	GRAB	O	U		1				x
6	P-266-R17EC2	8/16/2023	9:52	GRAB	O	U		1				x
7	P-267-R17EC3	8/16/2023	9:53	GRAB	O	U		1				x
8	P-268-R17EC4	8/16/2023	9:54	GRAB	O	U		1				x
9	P-269-R23SS	8/17/2023	9:55	GRAB	O	U		1				x
10	P-270-R27SS	8/17/2023	10:20	GRAB	O	U		3				x

Relinquished by: (signature)	Date/Time: 8-22-23 1258
Received by: (signature)	Date/Time: 1258 8-22-23
Relinquished by: (signature)	Date/Time: 1746 8-22-23
Received by: (signature) 38,22,3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6,5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3268

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-271-R25ASS	8/17/2023	10:45	GRAB	O	U		1				x
12	P-272-R21SS	8/17/2023	11:20	GRAB	O	U		1				x
13	P-273-R31SS	8/17/2023	11:45	GRAB	O	U		1				x
14	P-274-S12R	8/16/2023	9:55	GRAB	O	U		1				x
15	p-FD-01	8/14/2023	8:00	GRAB	O	U		1				x
16	p-FD-02	8/14/2023	8:01	GRAB	O	U		1				x
17	p-FD-03	8/14/2023	8:02	GRAB	O	U		1				x
18	p-FD-04	8/14/2023	8:03	GRAB	O	U		1				x
19	p-FD-05	8/15/2023	8:00	GRAB	O	U		1				x
20	p-FD-06	8/15/2023	8:01	GRAB	O	U		1				x

[3] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8.22.23 1255	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8-22-23 1255	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8 22, 39	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis Group

Project: St Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: ER 8/22/23 1746

Back-Sheet By / Date / Time: MCM 8/22/23 2217

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 22.26 38.39.56

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Quaitrax ID: 120836

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics											VOA Vials				Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter		500mL		250mL															
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact					
1			—																											
2			—																											
3			—																											
4			2																											
5			—																											
6			—																											
7			—																											
8			—																											
9			—																											
10			—																											
11			—																											
12			—																											
13			—																											
14			—																											
15			—																											
16			—																											
17			—																											
18			—																											
19			—																											
20			—																											

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 14, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23H3270

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23H3270-01 5

23H3270-02 6

23H3270-03 7

23H3270-04 8

23H3270-05 9

23H3270-06 10

23H3270-07 11

23H3270-08 12

23H3270-09 13

Sample Preparation Information 14

QC Data 15

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 15

B351285 15

B351344 16

Dual Column RPD Report 17

Flag/Qualifier Summary 29

Certifications 30

Chain of Custody/Sample Receipt 31

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 9/14/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H3270

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-FD-07	23H3270-01	Paint		SW-846 8082A	
P-FD-08	23H3270-02	Paint		SW-846 8082A	
P-FD-09	23H3270-03	Paint		SW-846 8082A	
P-FD-010	23H3270-04	Paint		SW-846 8082A	
P-FD-011	23H3270-05	Paint		SW-846 8082A	
P-FD-012	23H3270-06	Paint		SW-846 8082A	
P-FD-013	23H3270-07	Paint		SW-846 8082A	
P-FD-014	23H3270-08	Paint		SW-846 8082A	
P-FD-015	23H3270-09	Paint		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

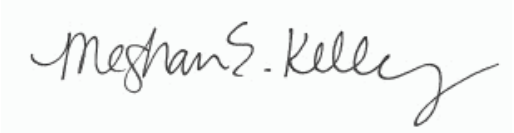
Decachlorobiphenyl
23H3270-05[P-FD-011]

Decachlorobiphenyl [2C]
23H3270-05[P-FD-011]

Tetrachloro-m-xylene
23H3270-05[P-FD-011]

Tetrachloro-m-xylene [2C]
23H3270-05[P-FD-011]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-07 | Sampled: 8/15/2023 08:02

Sample ID: 23H3270-01

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1221 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1232 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1242 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1248 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1254 [2]	4.9	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1260 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1262 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG
Aroclor-1268 [1]	ND	0.40	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:10	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.3	30-150		9/9/23 20:10
Decachlorobiphenyl [2]	80.9	30-150		9/9/23 20:10
Tetrachloro-m-xylene [1]	86.0	30-150		9/9/23 20:10
Tetrachloro-m-xylene [2]	86.4	30-150		9/9/23 20:10

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-08 | Sampled: 8/16/2023 16:00

Sample ID: 23H3270-02

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1221 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1232 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1242 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1248 [2]	3.1	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1254 [2]	2.7	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1260 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1262 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG
Aroclor-1268 [1]	ND	0.44	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 20:27	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.5	30-150		9/9/23 20:27
Decachlorobiphenyl [2]	80.9	30-150		9/9/23 20:27
Tetrachloro-m-xylene [1]	86.2	30-150		9/9/23 20:27
Tetrachloro-m-xylene [2]	86.9	30-150		9/9/23 20:27

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-09 | Sampled: 8/16/2023 16:01

Sample ID: 23H3270-03

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1221 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1232 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1242 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1248 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1254 [1]	140	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1260 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1262 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG
Aroclor-1268 [1]	ND	7.7	mg/Kg	20		SW-846 8082A	9/7/23	9/9/23 20:45	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.4	30-150		9/9/23 20:45
Decachlorobiphenyl [2]	93.4	30-150		9/9/23 20:45
Tetrachloro-m-xylene [1]	87.5	30-150		9/9/23 20:45
Tetrachloro-m-xylene [2]	88.1	30-150		9/9/23 20:45

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-010 | Sampled: 8/16/2023 16:02

Sample ID: 23H3270-04

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1221 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1232 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1242 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1248 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1254 [1]	0.56	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1260 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1262 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG
Aroclor-1268 [1]	ND	0.35	mg/Kg	1		SW-846 8082A	9/7/23	9/9/23 21:02	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.2	30-150		9/9/23 21:02
Decachlorobiphenyl [2]	83.4	30-150		9/9/23 21:02
Tetrachloro-m-xylene [1]	87.5	30-150		9/9/23 21:02
Tetrachloro-m-xylene [2]	88.0	30-150		9/9/23 21:02

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-011 | Sampled: 8/15/2023 16:03

Sample ID: 23H3270-05

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1221 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1232 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1242 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1248 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1254 [1]	210	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1260 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1262 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG
Aroclor-1268 [1]	ND	22	mg/Kg	50		SW-846 8082A	9/7/23	9/9/23 21:20	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	9/9/23 21:20
Decachlorobiphenyl [2]	*	30-150	S-01	9/9/23 21:20
Tetrachloro-m-xylene [1]	*	30-150	S-01	9/9/23 21:20
Tetrachloro-m-xylene [2]	*	30-150	S-01	9/9/23 21:20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-012 | Sampled: 8/14/2023 16:01

Sample ID: 23H3270-06

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1221 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1232 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1242 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1248 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1254 [2]	41	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1260 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1262 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG
Aroclor-1268 [1]	ND	4.1	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:37	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.6	30-150		9/9/23 21:37
Decachlorobiphenyl [2]	92.3	30-150		9/9/23 21:37
Tetrachloro-m-xylene [1]	87.7	30-150		9/9/23 21:37
Tetrachloro-m-xylene [2]	87.6	30-150		9/9/23 21:37

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-013 | Sampled: 8/14/2023 16:00

Sample ID: 23H3270-07

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1221 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1232 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1242 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1248 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1254 [2]	23	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1260 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1262 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG
Aroclor-1268 [1]	ND	4.7	mg/Kg	10		SW-846 8082A	9/7/23	9/9/23 21:55	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	110	30-150		9/9/23 21:55
Decachlorobiphenyl [2]	106	30-150		9/9/23 21:55
Tetrachloro-m-xylene [1]	106	30-150		9/9/23 21:55
Tetrachloro-m-xylene [2]	105	30-150		9/9/23 21:55

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-014 | Sampled: 8/16/2023 16:04

Sample ID: 23H3270-08

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1221 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1232 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1242 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1248 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1254 [2]	6.1	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1260 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1262 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG
Aroclor-1268 [1]	ND	1.8	mg/Kg	4		SW-846 8082A	9/7/23	9/9/23 22:12	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.0	30-150		9/9/23 22:12
Decachlorobiphenyl [2]	79.1	30-150		9/9/23 22:12
Tetrachloro-m-xylene [1]	79.4	30-150		9/9/23 22:12
Tetrachloro-m-xylene [2]	96.2	30-150		9/9/23 22:12

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23H3270

Date Received: 8/22/2023

Field Sample #: P-FD-015 | Sampled: 8/17/2023 08:00

Sample ID: 23H3270-09

Sample Matrix: Paint

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	9/7/23	9/13/23 14:18	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	64.7	30-150		9/13/23 14:18
Decachlorobiphenyl [2]	63.5	30-150		9/13/23 14:18
Tetrachloro-m-xylene [1]	49.5	30-150		9/13/23 14:18
Tetrachloro-m-xylene [2]	49.9	30-150		9/13/23 14:18

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3270-01 [P-FD-07]	B351285	0.248	10.0	09/07/23
23H3270-02 [P-FD-08]	B351285	0.226	10.0	09/07/23
23H3270-03 [P-FD-09]	B351285	0.261	10.0	09/07/23
23H3270-04 [P-FD-010]	B351285	0.286	10.0	09/07/23
23H3270-05 [P-FD-011]	B351285	0.229	10.0	09/07/23
23H3270-06 [P-FD-012]	B351285	0.241	10.0	09/07/23
23H3270-07 [P-FD-013]	B351285	0.215	10.0	09/07/23
23H3270-08 [P-FD-014]	B351285	0.220	10.0	09/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23H3270-09 [P-FD-015]	B351344	2.00	10.0	09/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351285 - SW-846 3540C										
Blank (B351285-BLK1)				Prepared: 09/07/23 Analyzed: 09/09/23						
Aroclor-1016	ND	0.50	mg/Kg							
Aroclor-1016 [2C]	ND	0.50	mg/Kg							
Aroclor-1221	ND	0.50	mg/Kg							
Aroclor-1221 [2C]	ND	0.50	mg/Kg							
Aroclor-1232	ND	0.50	mg/Kg							
Aroclor-1232 [2C]	ND	0.50	mg/Kg							
Aroclor-1242	ND	0.50	mg/Kg							
Aroclor-1242 [2C]	ND	0.50	mg/Kg							
Aroclor-1248	ND	0.50	mg/Kg							
Aroclor-1248 [2C]	ND	0.50	mg/Kg							
Aroclor-1254	ND	0.50	mg/Kg							
Aroclor-1254 [2C]	ND	0.50	mg/Kg							
Aroclor-1260	ND	0.50	mg/Kg							
Aroclor-1260 [2C]	ND	0.50	mg/Kg							
Aroclor-1262	ND	0.50	mg/Kg							
Aroclor-1262 [2C]	ND	0.50	mg/Kg							
Aroclor-1268	ND	0.50	mg/Kg							
Aroclor-1268 [2C]	ND	0.50	mg/Kg							
Surrogate: Decachlorobiphenyl	*9.47*		mg/Kg	10.0		94.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.72*		mg/Kg	10.0		87.2	30-150			
Surrogate: Tetrachloro-m-xylene	*9.18*		mg/Kg	10.0		91.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.99*		mg/Kg	10.0		89.9	30-150			
LCS (B351285-BS1)				Prepared: 09/07/23 Analyzed: 09/09/23						
Aroclor-1016	2.0	0.50	mg/Kg	2.50		80.0	40-140			
Aroclor-1016 [2C]	2.0	0.50	mg/Kg	2.50		80.5	40-140			
Aroclor-1260	1.9	0.50	mg/Kg	2.50		76.6	40-140			
Aroclor-1260 [2C]	1.8	0.50	mg/Kg	2.50		73.9	40-140			
Surrogate: Decachlorobiphenyl	*9.41*		mg/Kg	10.0		94.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.91*		mg/Kg	10.0		89.1	30-150			
Surrogate: Tetrachloro-m-xylene	*8.61*		mg/Kg	10.0		86.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.44*		mg/Kg	10.0		84.4	30-150			
LCS Dup (B351285-BSD1)				Prepared: 09/07/23 Analyzed: 09/09/23						
Aroclor-1016	2.0	0.50	mg/Kg	2.50		78.5	40-140	1.81	30	
Aroclor-1016 [2C]	1.9	0.50	mg/Kg	2.50		75.6	40-140	6.37	30	
Aroclor-1260	1.9	0.50	mg/Kg	2.50		75.4	40-140	1.67	30	
Aroclor-1260 [2C]	1.9	0.50	mg/Kg	2.50		76.4	40-140	3.32	30	
Surrogate: Decachlorobiphenyl	*9.11*		mg/Kg	10.0		91.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*8.65*		mg/Kg	10.0		86.5	30-150			
Surrogate: Tetrachloro-m-xylene	*8.56*		mg/Kg	10.0		85.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*8.36*		mg/Kg	10.0		83.6	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351344 - SW-846 3540C										
Blank (B351344-BLK1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.829*		mg/Kg	1.00		82.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.826*		mg/Kg	1.00		82.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.785*		mg/Kg	1.00		78.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.789*		mg/Kg	1.00		78.9	30-150			
LCS (B351344-BS1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.61	0.10	mg/Kg	1.00		60.8	40-140			
Aroclor-1016 [2C]	0.63	0.10	mg/Kg	1.00		63.3	40-140			
Aroclor-1260	0.61	0.10	mg/Kg	1.00		60.5	40-140			
Aroclor-1260 [2C]	0.61	0.10	mg/Kg	1.00		61.2	40-140			
Surrogate: Decachlorobiphenyl	*0.767*		mg/Kg	1.00		76.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.770*		mg/Kg	1.00		77.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.684*		mg/Kg	1.00		68.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.688*		mg/Kg	1.00		68.8	30-150			
LCS Dup (B351344-BSD1)				Prepared: 09/07/23 Analyzed: 09/13/23						
Aroclor-1016	0.61	0.10	mg/Kg	1.00		60.9	40-140	0.214	30	
Aroclor-1016 [2C]	0.63	0.10	mg/Kg	1.00		63.2	40-140	0.179	30	
Aroclor-1260	0.60	0.10	mg/Kg	1.00		60.0	40-140	0.905	30	
Aroclor-1260 [2C]	0.61	0.10	mg/Kg	1.00		60.8	40-140	0.605	30	
Surrogate: Decachlorobiphenyl	*0.792*		mg/Kg	1.00		79.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.790*		mg/Kg	1.00		79.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.708*		mg/Kg	1.00		70.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.714*		mg/Kg	1.00		71.4	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-07

Lab Sample ID: 23H3270-01 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.2	
	2	0.000	0.000	0.000	4.9	15.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-08

Lab Sample ID: 23H3270-02 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	2.5	
	2	0.000	0.000	0.000	3.1	17.5
Aroclor-1254	1	0.000	0.000	0.000	2.6	
	2	0.000	0.000	0.000	2.7	3.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-09

Lab Sample ID: 23H3270-03

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	140	
	2	0.000	0.000	0.000	130	7.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-010

Lab Sample ID: 23H3270-04

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.56	
	2	0.000	0.000	0.000	0.44	24.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-011

Lab Sample ID: 23H3270-05

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	210	
	2	0.000	0.000	0.000	200	4.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-012

Lab Sample ID: 23H3270-06

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	40	
	2	0.000	0.000	0.000	41	2.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-013

Lab Sample ID: 23H3270-07

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	17	
	2	0.000	0.000	0.000	23	30.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-014

Lab Sample ID: 23H3270-08

Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4.9	
	2	0.000	0.000	0.000	6.1	21.8

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351285-BS1 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	2.0	0.0
Aroclor-1260	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.8	5.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351285-BSD1 Date(s) Analyzed: 09/09/2023 09/09/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.0	
	2	0.000	0.000	0.000	1.9	5.1
Aroclor-1260	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.9	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B351344-BS1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.63	3.2
Aroclor-1260	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.61	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B351344-BSD1 Date(s) Analyzed: 09/13/2023 09/13/2023

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.63	3.2
Aroclor-1260	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.61	1.7

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23H3270

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	p-FD-07	8/15/2023	8:02	GRAB	O	U		1				x
2	p-FD-08	8/16/2023	16:00	GRAB	O	U		1				x
3	p-FD-09	8/16/2023	16:01	GRAB	O	U		1				x
4	p-FD-010	8/16/2023	16:02	GRAB	O	U		1				x
5	p-FD-011	8/15/2023	16:03	GRAB	O	U		1				x
6	p-FD-012	8/14/2023	16:01	GRAB	O	U		1				x
7	p-FD-013	8/14/2023	16:00	GRAB	O	U		1				x
8	p-FD-014	8/16/2023	16:04	GRAB	O	U		1				x
9	p-FD-015	8/17/2023	8:00	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: RST 8-22-23
Received by: (signature)	Date/Time: 1255 8-22-23
Relinquished by: (signature)	Date/Time: 1746 8-22-23
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 1.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

RF

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/23 1746

Back-Sheet By / Date / Time Mem 8/22/23 2217

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 22.26 38.39.56

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

* Sample split into fifteen separate work orders

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑ see notes	☐
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics												VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter			500mL		250mL																	
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact					
1																																	
2			—																														
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	
13																																	
14																																	
15																																	
16																																	
17																																	
18																																	
19																																	
20																																	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

October 9, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23J0273

Enclosed are results of analyses for samples as received by the laboratory on October 3, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 6

23J0273-01 6

23J0273-02 7

23J0273-03 8

23J0273-04 9

23J0273-05 10

23J0273-06 11

23J0273-07 12

23J0273-08 13

23J0273-09 14

23J0273-10 15

23J0273-11 16

23J0273-12 17

23J0273-13 18

23J0273-14 19

23J0273-15 20

23J0273-16 21

23J0273-17 22

23J0273-18 23

23J0273-19 24

23J0273-20 25

Sample Preparation Information 26

QC Data 27

Table of Contents (continued)

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 27

B353837 27

B353838 28

B354262 29

Dual Column RPD Report 30

Flag/Qualifier Summary 53

Certifications 54

Chain of Custody/Sample Receipt 56

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 10/9/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23J0273

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-275-Ex	23J0273-01	Caulk		SW-846 8082A	
P-276-Ex	23J0273-02	Caulk		SW-846 8082A	
P-277-Ex	23J0273-03	Caulk		SW-846 8082A	
P-278-Ex	23J0273-04	Caulk		SW-846 8082A	
P-279-Ex	23J0273-05	Caulk		SW-846 8082A	
P-280-Ex	23J0273-06	Caulk		SW-846 8082A	
P-281-Ex	23J0273-07	Caulk		SW-846 8082A	
P-282-Ex	23J0273-08	Caulk		SW-846 8082A	
P-283-Ex	23J0273-09	Caulk		SW-846 8082A	
P-284-R6	23J0273-10	Product/Solid		SW-846 8082A	
P-285-R6	23J0273-11	Product/Solid		SW-846 8082A	
P-286-R10	23J0273-12	Product/Solid		SW-846 8082A	
P-287-R13	23J0273-13	Product/Solid		SW-846 8082A	
P-288-R13	23J0273-14	Product/Solid		SW-846 8082A	
P-289-R14	23J0273-15	Product/Solid		SW-846 8082A	
P-290-R12	23J0273-16	Product/Solid		SW-846 8082A	
P-291-R12	23J0273-17	Product/Solid		SW-846 8082A	
P-292-R12	23J0273-18	Product/Solid		SW-846 8082A	
P-293-R18	23J0273-19	Product/Solid		SW-846 8082A	
P-294-R18	23J0273-20	Product/Solid		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

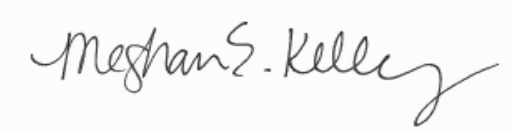
Decachlorobiphenyl
23J0273-19[P-293-R18], 23J0273-20[P-294-R18]

Decachlorobiphenyl [2C]
23J0273-19[P-293-R18], 23J0273-20[P-294-R18]

Tetrachloro-m-xylene
23J0273-19[P-293-R18], 23J0273-20[P-294-R18]

Tetrachloro-m-xylene [2C]
23J0273-19[P-293-R18], 23J0273-20[P-294-R18]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-275-Ex | Sampled: 10/2/2023 13:25

Sample ID: 23J0273-01

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1221 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1232 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1242 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1248 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1254 [1]	5.9	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1260 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1262 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM
Aroclor-1268 [1]	ND	0.70	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 14:33	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.2	30-150		10/5/23 14:33
Decachlorobiphenyl [2]	99.4	30-150		10/5/23 14:33
Tetrachloro-m-xylene [1]	85.2	30-150		10/5/23 14:33
Tetrachloro-m-xylene [2]	77.1	30-150		10/5/23 14:33

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-276-Ex | Sampled: 10/2/2023 13:19

Sample ID: 23J0273-02

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1221 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1232 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1242 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1248 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1254 [1]	17	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1260 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1262 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM
Aroclor-1268 [1]	ND	3.6	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 14:50	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	104	30-150		10/5/23 14:50
Decachlorobiphenyl [2]	111	30-150		10/5/23 14:50
Tetrachloro-m-xylene [1]	101	30-150		10/5/23 14:50
Tetrachloro-m-xylene [2]	89.9	30-150		10/5/23 14:50

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-277-Ex | Sampled: 10/2/2023 13:15

Sample ID: 23J0273-03

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1221 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1232 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1242 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1248 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1254 [1]	10	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1260 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1262 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM
Aroclor-1268 [1]	ND	3.7	mg/Kg	20		SW-846 8082A	10/3/23	10/5/23 15:07	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	118	30-150		10/5/23 15:07
Decachlorobiphenyl [2]	124	30-150		10/5/23 15:07
Tetrachloro-m-xylene [1]	109	30-150		10/5/23 15:07
Tetrachloro-m-xylene [2]	96.0	30-150		10/5/23 15:07

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-278-Ex | Sampled: 10/2/2023 12:34

Sample ID: 23J0273-04

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1221 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1232 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1242 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1248 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1254 [1]	1.4	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1260 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1262 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM
Aroclor-1268 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:24	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.8	30-150		10/5/23 15:24
Decachlorobiphenyl [2]	103	30-150		10/5/23 15:24
Tetrachloro-m-xylene [1]	90.9	30-150		10/5/23 15:24
Tetrachloro-m-xylene [2]	82.0	30-150		10/5/23 15:24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-279-Ex | Sampled: 10/2/2023 12:29

Sample ID: 23J0273-05

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1221 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1232 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1242 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1248 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1254 [1]	1.6	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1260 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1262 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM
Aroclor-1268 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 15:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.2	30-150		10/5/23 15:41
Decachlorobiphenyl [2]	99.9	30-150		10/5/23 15:41
Tetrachloro-m-xylene [1]	89.2	30-150		10/5/23 15:41
Tetrachloro-m-xylene [2]	80.1	30-150		10/5/23 15:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-280-Ex | Sampled: 10/2/2023 12:23

Sample ID: 23J0273-06

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1221 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1232 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1242 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1248 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1254 [2]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1260 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1262 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG
Aroclor-1268 [1]	ND	0.78	mg/Kg	4		SW-846 8082A	10/6/23	10/9/23 12:51	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	63.6	30-150		10/9/23 12:51
Decachlorobiphenyl [2]	63.7	30-150		10/9/23 12:51
Tetrachloro-m-xylene [1]	62.6	30-150		10/9/23 12:51
Tetrachloro-m-xylene [2]	61.3	30-150		10/9/23 12:51

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-281-Ex | Sampled: 10/2/2023 12:06

Sample ID: 23J0273-07

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1221 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1232 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1242 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1248 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1254 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1260 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1262 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM
Aroclor-1268 [1]	ND	0.75	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:16	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.3	30-150		10/5/23 16:16
Decachlorobiphenyl [2]	89.7	30-150		10/5/23 16:16
Tetrachloro-m-xylene [1]	79.2	30-150		10/5/23 16:16
Tetrachloro-m-xylene [2]	71.7	30-150		10/5/23 16:16

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-282-Ex | Sampled: 10/2/2023 12:04

Sample ID: 23J0273-08

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1221 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1232 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1242 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1248 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1254 [1]	0.80	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1260 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1262 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM
Aroclor-1268 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:33	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.8	30-150		10/5/23 16:33
Decachlorobiphenyl [2]	94.2	30-150		10/5/23 16:33
Tetrachloro-m-xylene [1]	86.2	30-150		10/5/23 16:33
Tetrachloro-m-xylene [2]	77.0	30-150		10/5/23 16:33

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-283-Ex | Sampled: 10/2/2023 12:03

Sample ID: 23J0273-09

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1221 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1232 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1242 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1248 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1254 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1260 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1262 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM
Aroclor-1268 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/3/23	10/5/23 16:50	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.0	30-150		10/5/23 16:50
Decachlorobiphenyl [2]	78.8	30-150		10/5/23 16:50
Tetrachloro-m-xylene [1]	73.2	30-150		10/5/23 16:50
Tetrachloro-m-xylene [2]	65.3	30-150		10/5/23 16:50

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-284-R6 | Sampled: 10/2/2023 11:32

Sample ID: 23J0273-10

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1221 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1232 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1242 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1248 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1254 [2]	2.6	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1260 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1262 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM
Aroclor-1268 [1]	ND	0.89	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.0	30-150		10/5/23 23:41
Decachlorobiphenyl [2]	91.0	30-150		10/5/23 23:41
Tetrachloro-m-xylene [1]	89.0	30-150		10/5/23 23:41
Tetrachloro-m-xylene [2]	85.1	30-150		10/5/23 23:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-285-R6 | Sampled: 10/2/2023 11:28

Sample ID: 23J0273-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1221 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1232 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1242 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1248 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1254 [2]	2.2	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1260 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1262 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM
Aroclor-1268 [1]	ND	0.98	mg/Kg	10		SW-846 8082A	10/3/23	10/5/23 23:58	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.5	30-150		10/5/23 23:58
Decachlorobiphenyl [2]	76.3	30-150		10/5/23 23:58
Tetrachloro-m-xylene [1]	71.6	30-150		10/5/23 23:58
Tetrachloro-m-xylene [2]	69.2	30-150		10/5/23 23:58

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-286-R10 | Sampled: 10/2/2023 11:25

Sample ID: 23J0273-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1221 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1232 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1242 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1248 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1254 [2]	1.6	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1260 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1262 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM
Aroclor-1268 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:16	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.2	30-150		10/6/23 0:16
Decachlorobiphenyl [2]	93.8	30-150		10/6/23 0:16
Tetrachloro-m-xylene [1]	82.9	30-150		10/6/23 0:16
Tetrachloro-m-xylene [2]	82.5	30-150		10/6/23 0:16

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-287-R13 | Sampled: 10/2/2023 11:14

Sample ID: 23J0273-13

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1221 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1232 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1242 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1248 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1254 [2]	4.3	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1260 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1262 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM
Aroclor-1268 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:33	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	58.9	30-150		10/6/23	0:33
Decachlorobiphenyl [2]	66.2	30-150		10/6/23	0:33
Tetrachloro-m-xylene [1]	84.3	30-150		10/6/23	0:33
Tetrachloro-m-xylene [2]	82.4	30-150		10/6/23	0:33

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-288-R13 | Sampled: 10/2/2023 11:12

Sample ID: 23J0273-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1221 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1232 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1242 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1248 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1254 [2]	2.2	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1260 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1262 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM
Aroclor-1268 [1]	ND	0.88	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 0:51	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	34.9	30-150		10/6/23 0:51
Decachlorobiphenyl [2]	38.3	30-150		10/6/23 0:51
Tetrachloro-m-xylene [1]	49.5	30-150		10/6/23 0:51
Tetrachloro-m-xylene [2]	47.0	30-150		10/6/23 0:51

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-289-R14 | Sampled: 10/2/2023 11:10

Sample ID: 23J0273-15

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1221 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1232 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1242 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1248 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1254 [2]	11	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1260 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1262 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM
Aroclor-1268 [1]	ND	2.0	mg/Kg	20		SW-846 8082A	10/3/23	10/6/23 1:08	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	62.0	30-150		10/6/23 1:08
Decachlorobiphenyl [2]	66.1	30-150		10/6/23 1:08
Tetrachloro-m-xylene [1]	87.2	30-150		10/6/23 1:08
Tetrachloro-m-xylene [2]	82.7	30-150		10/6/23 1:08

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-290-R12 | Sampled: 10/2/2023 11:03

Sample ID: 23J0273-16

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1221 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1232 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1242 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1248 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1254 [2]	3.3	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1260 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1262 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM
Aroclor-1268 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:25	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	47.6	30-150		10/6/23	1:25
Decachlorobiphenyl [2]	50.7	30-150		10/6/23	1:25
Tetrachloro-m-xylene [1]	67.5	30-150		10/6/23	1:25
Tetrachloro-m-xylene [2]	65.8	30-150		10/6/23	1:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-291-R12 | Sampled: 10/2/2023 11:01

Sample ID: 23J0273-17

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1221 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1232 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1242 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1248 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1254 [2]	2.7	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1260 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1262 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM
Aroclor-1268 [1]	ND	0.74	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 1:43	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	51.6	30-150		10/6/23	1:43
Decachlorobiphenyl [2]	55.0	30-150		10/6/23	1:43
Tetrachloro-m-xylene [1]	70.5	30-150		10/6/23	1:43
Tetrachloro-m-xylene [2]	69.6	30-150		10/6/23	1:43

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-292-R12 | Sampled: 10/2/2023 10:58

Sample ID: 23J0273-18

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1221 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1232 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1242 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1248 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1254 [2]	3.4	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1260 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1262 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM
Aroclor-1268 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 3:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	62.2	30-150		10/6/23 3:05
Decachlorobiphenyl [2]	64.9	30-150		10/6/23 3:05
Tetrachloro-m-xylene [1]	75.6	30-150		10/6/23 3:05
Tetrachloro-m-xylene [2]	74.2	30-150		10/6/23 3:05

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-293-R18 | Sampled: 10/2/2023 10:53

Sample ID: 23J0273-19

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1221 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1232 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1242 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1248 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1254 [1]	5700	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1260 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1262 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM
Aroclor-1268 [1]	ND	970	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:09	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	10/6/23 7:09
Decachlorobiphenyl [2]	*	30-150	S-01	10/6/23 7:09
Tetrachloro-m-xylene [1]	*	30-150	S-01	10/6/23 7:09
Tetrachloro-m-xylene [2]	*	30-150	S-01	10/6/23 7:09

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury, VT | Sample Description: | Work Order: 23J0273

Date Received: 10/3/2023

Field Sample #: P-294-R18 | Sampled: 10/2/2023 10:49

Sample ID: 23J0273-20

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1221 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1232 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1242 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1248 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1254 [1]	4600	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1260 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1262 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM
Aroclor-1268 [1]	ND	800	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:27	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	*	30-150	S-01	10/6/23 7:27	
Decachlorobiphenyl [2]	*	30-150	S-01	10/6/23 7:27	
Tetrachloro-m-xylene [1]	*	30-150	S-01	10/6/23 7:27	
Tetrachloro-m-xylene [2]	*	30-150	S-01	10/6/23 7:27	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23J0273-01 [P-275-Ex]	B353837	0.574	10.0	10/03/23
23J0273-02 [P-276-Ex]	B353837	0.562	10.0	10/03/23
23J0273-03 [P-277-Ex]	B353837	0.541	10.0	10/03/23
23J0273-04 [P-278-Ex]	B353837	0.522	10.0	10/03/23
23J0273-05 [P-279-Ex]	B353837	0.525	10.0	10/03/23
23J0273-07 [P-281-Ex]	B353837	0.535	10.0	10/03/23
23J0273-08 [P-282-Ex]	B353837	0.551	10.0	10/03/23
23J0273-09 [P-283-Ex]	B353837	0.567	10.0	10/03/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23J0273-06RE1 [P-280-Ex]	B354262	0.510	10.0	10/06/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23J0273-10 [P-284-R6]	B353838	2.25	10.0	10/03/23
23J0273-11 [P-285-R6]	B353838	2.05	10.0	10/03/23
23J0273-12 [P-286-R10]	B353838	2.22	10.0	10/03/23
23J0273-13 [P-287-R13]	B353838	2.08	10.0	10/03/23
23J0273-14 [P-288-R13]	B353838	2.28	10.0	10/03/23
23J0273-15 [P-289-R14]	B353838	2.05	10.0	10/03/23
23J0273-16 [P-290-R12]	B353838	2.14	10.0	10/03/23
23J0273-17 [P-291-R12]	B353838	2.69	10.0	10/03/23
23J0273-18 [P-292-R12]	B353838	2.06	10.0	10/03/23
23J0273-19 [P-293-R18]	B353838	2.07	10.0	10/03/23
23J0273-20 [P-294-R18]	B353838	2.51	10.0	10/03/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B353837 - SW-846 3540C										
Blank (B353837-BLK1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	ND	0.17	mg/Kg							
Aroclor-1016 [2C]	ND	0.17	mg/Kg							
Aroclor-1221	ND	0.17	mg/Kg							
Aroclor-1221 [2C]	ND	0.17	mg/Kg							
Aroclor-1232	ND	0.17	mg/Kg							
Aroclor-1232 [2C]	ND	0.17	mg/Kg							
Aroclor-1242	ND	0.17	mg/Kg							
Aroclor-1242 [2C]	ND	0.17	mg/Kg							
Aroclor-1248	ND	0.17	mg/Kg							
Aroclor-1248 [2C]	ND	0.17	mg/Kg							
Aroclor-1254	ND	0.17	mg/Kg							
Aroclor-1254 [2C]	ND	0.17	mg/Kg							
Aroclor-1260	ND	0.17	mg/Kg							
Aroclor-1260 [2C]	ND	0.17	mg/Kg							
Aroclor-1262	ND	0.17	mg/Kg							
Aroclor-1262 [2C]	ND	0.17	mg/Kg							
Aroclor-1268	ND	0.17	mg/Kg							
Aroclor-1268 [2C]	ND	0.17	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.51*		mg/Kg	3.42		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.83*		mg/Kg	3.42		112	30-150			
Surrogate: Tetrachloro-m-xylene	*3.05*		mg/Kg	3.42		89.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.80*		mg/Kg	3.42		81.7	30-150			
LCS (B353837-BS1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	3.1	0.19	mg/Kg	3.75		83.0	40-140			
Aroclor-1016 [2C]	3.0	0.19	mg/Kg	3.75		80.4	40-140			
Aroclor-1260	3.3	0.19	mg/Kg	3.75		88.2	40-140			
Aroclor-1260 [2C]	3.2	0.19	mg/Kg	3.75		85.5	40-140			
Surrogate: Decachlorobiphenyl	*3.76*		mg/Kg	3.75		101	30-150			
Surrogate: Decachlorobiphenyl [2C]	*4.15*		mg/Kg	3.75		111	30-150			
Surrogate: Tetrachloro-m-xylene	*3.46*		mg/Kg	3.75		92.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.17*		mg/Kg	3.75		84.7	30-150			
LCS Dup (B353837-BSD1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	2.9	0.17	mg/Kg	3.42		85.1	40-140	6.57	30	
Aroclor-1016 [2C]	2.9	0.17	mg/Kg	3.42		85.4	40-140	3.02	30	
Aroclor-1260	3.4	0.17	mg/Kg	3.42		99.5	40-140	3.05	30	
Aroclor-1260 [2C]	3.2	0.17	mg/Kg	3.42		93.0	40-140	0.662	30	
Surrogate: Decachlorobiphenyl	*3.48*		mg/Kg	3.42		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.86*		mg/Kg	3.42		113	30-150			
Surrogate: Tetrachloro-m-xylene	*3.21*		mg/Kg	3.42		93.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.95*		mg/Kg	3.42		86.3	30-150			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B353838 - SW-846 3540C										
Blank (B353838-BLK1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	ND	0.097	mg/Kg							
Aroclor-1016 [2C]	ND	0.097	mg/Kg							
Aroclor-1221	ND	0.097	mg/Kg							
Aroclor-1221 [2C]	ND	0.097	mg/Kg							
Aroclor-1232	ND	0.097	mg/Kg							
Aroclor-1232 [2C]	ND	0.097	mg/Kg							
Aroclor-1242	ND	0.097	mg/Kg							
Aroclor-1242 [2C]	ND	0.097	mg/Kg							
Aroclor-1248	ND	0.097	mg/Kg							
Aroclor-1248 [2C]	ND	0.097	mg/Kg							
Aroclor-1254	ND	0.097	mg/Kg							
Aroclor-1254 [2C]	ND	0.097	mg/Kg							
Aroclor-1260	ND	0.097	mg/Kg							
Aroclor-1260 [2C]	ND	0.097	mg/Kg							
Aroclor-1262	ND	0.097	mg/Kg							
Aroclor-1262 [2C]	ND	0.097	mg/Kg							
Aroclor-1268	ND	0.097	mg/Kg							
Aroclor-1268 [2C]	ND	0.097	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.997*		mg/Kg	0.966		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.984*		mg/Kg	0.966		102	30-150			
Surrogate: Tetrachloro-m-xylene	*0.902*		mg/Kg	0.966		93.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.889*		mg/Kg	0.966		92.0	30-150			
LCS (B353838-BS1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	0.70	0.073	mg/Kg	0.727		96.7	40-140			
Aroclor-1016 [2C]	0.63	0.073	mg/Kg	0.727		86.4	40-140			
Aroclor-1260	0.67	0.073	mg/Kg	0.727		92.2	40-140			
Aroclor-1260 [2C]	0.60	0.073	mg/Kg	0.727		83.0	40-140			
Surrogate: Decachlorobiphenyl	*0.745*		mg/Kg	0.727		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.746*		mg/Kg	0.727		103	30-150			
Surrogate: Tetrachloro-m-xylene	*0.645*		mg/Kg	0.727		88.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.639*		mg/Kg	0.727		87.9	30-150			
LCS Dup (B353838-BSD1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	0.80	0.090	mg/Kg	0.901		89.0	40-140	13.1	30	
Aroclor-1016 [2C]	0.71	0.090	mg/Kg	0.901		78.6	40-140	11.9	30	
Aroclor-1260	0.77	0.090	mg/Kg	0.901		85.2	40-140	13.5	30	
Aroclor-1260 [2C]	0.70	0.090	mg/Kg	0.901		77.7	40-140	14.7	30	
Surrogate: Decachlorobiphenyl	*0.909*		mg/Kg	0.901		101	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.897*		mg/Kg	0.901		99.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.797*		mg/Kg	0.901		88.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.777*		mg/Kg	0.901		86.2	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B354262 - SW-846 3540C										
Blank (B354262-BLK1)				Prepared: 10/06/23 Analyzed: 10/09/23						
Aroclor-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Aroclor-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0.20	mg/Kg							
Aroclor-1254	ND	0.20	mg/Kg							
Aroclor-1254 [2C]	ND	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0.20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Aroclor-1268 [2C]	ND	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.89*		mg/Kg	4.00		97.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.92*		mg/Kg	4.00		98.1	30-150			
Surrogate: Tetrachloro-m-xylene	*3.81*		mg/Kg	4.00		95.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.66*		mg/Kg	4.00		91.6	30-150			
LCS (B354262-BS1)				Prepared: 10/06/23 Analyzed: 10/09/23						
Aroclor-1016	3.3	0.20	mg/Kg	4.00		81.3	40-140			
Aroclor-1016 [2C]	3.1	0.20	mg/Kg	4.00		76.3	40-140			
Aroclor-1260	3.2	0.20	mg/Kg	4.00		81.2	40-140			
Aroclor-1260 [2C]	2.9	0.20	mg/Kg	4.00		71.5	40-140			
Surrogate: Decachlorobiphenyl	*3.36*		mg/Kg	4.00		84.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.37*		mg/Kg	4.00		84.2	30-150			
Surrogate: Tetrachloro-m-xylene	*3.41*		mg/Kg	4.00		85.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.29*		mg/Kg	4.00		82.3	30-150			
LCS Dup (B354262-BSD1)				Prepared: 10/06/23 Analyzed: 10/09/23						
Aroclor-1016	3.7	0.20	mg/Kg	4.00		92.6	40-140	13.1	30	
Aroclor-1016 [2C]	3.4	0.20	mg/Kg	4.00		85.1	40-140	11.0	30	
Aroclor-1260	3.7	0.20	mg/Kg	4.00		91.8	40-140	12.2	30	
Aroclor-1260 [2C]	3.4	0.20	mg/Kg	4.00		85.3	40-140	17.6	30	
Surrogate: Decachlorobiphenyl	*3.89*		mg/Kg	4.00		97.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.88*		mg/Kg	4.00		97.1	30-150			
Surrogate: Tetrachloro-m-xylene	*3.90*		mg/Kg	4.00		97.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.75*		mg/Kg	4.00		93.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-275-Ex

Lab Sample ID: 23J0273-01 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5.9	
	2	0.000	0.000	0.000	5.4	8.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-276-Ex

Lab Sample ID: 23J0273-02 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	17	
	2	0.000	0.000	0.000	16	6.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-277-Ex

Lab Sample ID: 23J0273-03 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	10	
	2	0.000	0.000	0.000	9.6	4.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-278-Ex

Lab Sample ID: 23J0273-04 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.4	
	2	0.000	0.000	0.000	1.3	7.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-279-Ex

Lab Sample ID: 23J0273-05 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.6	
	2	0.000	0.000	0.000	1.5	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-282-Ex

Lab Sample ID: 23J0273-08 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.77	3.8

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-284-R6

Lab Sample ID: 23J0273-10 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.1	
	2	0.000	0.000	0.000	2.6	21.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-285-R6

Lab Sample ID: 23J0273-11

Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.7	
	2	0.000	0.000	0.000	2.2	25.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-286-R10

Lab Sample ID: 23J0273-12

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.5	
	2	0.000	0.000	0.000	1.6	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-287-R13

Lab Sample ID: 23J0273-13 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.8	
	2	0.000	0.000	0.000	4.3	12.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-288-R13

Lab Sample ID: 23J0273-14 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	2.2	14.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-289-R14

Lab Sample ID: 23J0273-15

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	11	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-290-R12

Lab Sample ID: 23J0273-16

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.0	
	2	0.000	0.000	0.000	3.3	9.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-291-R12

Lab Sample ID: 23J0273-17

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	2.5	
	2	0.000	0.000	0.000	2.7	7.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-292-R12

Lab Sample ID: 23J0273-18

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	3.3	
	2	0.000	0.000	0.000	3.4	3.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-293-R18

Lab Sample ID: 23J0273-19

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	5700	
	2	0.000	0.000	0.000	5300	7.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-294-R18

Lab Sample ID: 23J0273-20 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	4600	
	2	0.000	0.000	0.000	4200	11.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B353837-BS1 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	3.1	
	2	0.000	0.000	0.000	3.0	3.3
Aroclor-1260	1	0.000	0.000	0.000	3.3	
	2	0.000	0.000	0.000	3.2	3.1

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B353837-BSD1 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	2.9	
	2	0.000	0.000	0.000	2.9	0.0
Aroclor-1260	1	0.000	0.000	0.000	3.4	
	2	0.000	0.000	0.000	3.2	6.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B353838-BS1 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.70	
	2	0.000	0.000	0.000	0.63	10.5
Aroclor-1260	1	0.000	0.000	0.000	0.67	
	2	0.000	0.000	0.000	0.60	11.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B353838-BSD1 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.71	11.9
Aroclor-1260	1	0.000	0.000	0.000	0.77	
	2	0.000	0.000	0.000	0.70	9.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B354262-BS1 Date(s) Analyzed: 10/09/2023 10/09/2023

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	3.3	
	2	0.000	0.000	0.000	3.1	6.3
Aroclor-1260	1	0.000	0.000	0.000	3.2	
	2	0.000	0.000	0.000	2.9	12.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B354262-BSD1 Date(s) Analyzed: 10/09/2023 10/09/2023

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	3.7	
	2	0.000	0.000	0.000	3.4	8.5
Aroclor-1260	1	0.000	0.000	0.000	3.7	
	2	0.000	0.000	0.000	3.4	8.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23J0273
RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number:	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-275-Ex	10/2/2023	13:25	GRAB	O	U		1				x
2	P-276-Ex	10/2/2023	13:19	GRAB	O	U		1				x
3	P-277-Ex	10/2/2023	13:15	GRAB	O	U		1				x
4	P-278-Ex	10/2/2023	12:34	GRAB	O	U		1				x
5	P-279-Ex	10/2/2023	12:29	GRAB	O	U		1				x
6	P-280-Ex	10/2/2023	12:23	GRAB	O	U		1				x
7	P-281-Ex	10/2/2023	12:06	GRAB	O	U		1				x
8	P-282-Ex	10/2/2023	12:04	GRAB	O	U		1				x
9	P-283-Ex	10/2/2023	12:03	GRAB	O	U		1				x
10	P-284-R6	10/2/2023	11:32	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) John Maddigan	Date/Time: 10/2/23 14:18
Received by: (signature) 3.2°C	Date/Time: 10-3-23 0940
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. Th Chain of Custody is a legal document that must be complete and accurate and is used to determine wh analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pa Analytical values your partnership on each project and will try to assist with missing information, but w not be held accountable.

Table of Contents

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-285-R6	10/2/2023	11:28	GRAB	O	U		1				x
12	P-286-R10	10/2/2023	11:25	GRAB	O	U		1				x
13	P-287-R13	10/2/2023	11:14	GRAB	O	U		1				x
14	P-288-R13	10/2/2023	11:12	GRAB	O	U		1				x
15	P-289-R14	10/2/2023	11:10	GRAB	O	U		1				x
16	P-290-R12	10/2/2023	11:03	GRAB	O	U		1				x
17	P-291-R12	10/2/2023	11:01	GRAB	O	U		1				x
18	P-292-R12	10/2/2023	10:58	GRAB	O	U		1				x
19	P-293-R18	10/2/2023	10:53	GRAB	O	U		1				x
20	P-294-R18	10/2/2023	10:49	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) John Maddigan	Date/Time: 10/2/23 14:18
Received by: (signature) 3.2°C	Date/Time: 10.3.23 0940
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. Th Chain of Custody is a legal document that must be complete and accurate and is used to determine wh analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pa Analytical values your partnership on each project and will try to assist with missing information, but w not be held accountable.

Table of Contents

Fed Sign

FedEx® Tracking Track Another Shipment Local Scan Time Help

DELIVERED

Tuesday

10/3/23 at 9:40 AM

Signed for by: C.HENRIQUEZ

Obtain proof of delivery

How was your delivery?

☆ ☆ ☆ ☆ ☆

TRACKING ID

784507670139

DELIVERY STATUS

Delivered

FROM
Craftsbury Common, VT US
Label Created
10/2/23 1:23 PM

WE HAVE YOUR PACKAGE
SAINT JOHNSBURY, VT
10/2/23 2:23 PM

IN TRANSIT
WINDSOR LOCKS, CT
10/3/23 7:52 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
10/3/23 8:00 AM

DELIVERED
EAST LONGMEADOW, MA US
Delivered
10/3/23 at 9:40 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL
Contestlab39

SUBMIT

MORE OPTIONS

Manage Delivery

Shipment facts

Shipment overview

TRACKING NUMBER	784507670139
DELIVERED TO	Shipping/Receiving
SHIP DATE	10/2/23

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AAM/10-3-23/0940

Back-Sheet By / Date / Time AAM/10-3-23/1402

Temperature Method Temp. Gun # 5

Temp ✓ < 6° C Actual Temperature 3.2°C

Rush Samples: (Yes) / No Notify Ext teams

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

work order was split after the first 20 Samples

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑	☐
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Page 2 of 2

Qualtrax ID: 120836

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics												VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter		500mL		250mL																			
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
1				-																														
2																																		
3																																		
4																																		
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		
11																																		
12																																		
13																																		
14																																		
15																																		
16																																		
17				1																														
18			-																															
19		1																																
20																																		

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

October 6, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St Johnsbury , VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23J0277

Enclosed are results of analyses for samples as received by the laboratory on October 3, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23J0277-01 5

23J0277-02 6

23J0277-03 7

23J0277-04 8

23J0277-05 9

23J0277-06 10

Sample Preparation Information 11

QC Data 12

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 12

B353838 12

Dual Column RPD Report 14

Flag/Qualifier Summary 24

Certifications 25

Chain of Custody/Sample Receipt 27

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 10/6/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23J0277

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St Johnsbury , VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-295-R18	23J0277-01	Product/Solid		SW-846 8082A	
P-296-R15	23J0277-02	Product/Solid		SW-846 8082A	
P-297-R15	23J0277-03	Product/Solid		SW-846 8082A	
P-298-R15	23J0277-04	Product/Solid		SW-846 8082A	
P-FD-016	23J0277-05	Product/Solid		SW-846 8082A	
P-FD-017	23J0277-06	Product/Solid		SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016
B353838-MS1, B353838-MSD1

Aroclor-1016 [2C]
B353838-MS1, B353838-MSD1

Aroclor-1260
B353838-MS1, B353838-MSD1

Aroclor-1260 [2C]
B353838-MS1, B353838-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
23J0277-01[P-295-R18]

Decachlorobiphenyl [2C]
23J0277-01[P-295-R18]

Tetrachloro-m-xylene
23J0277-01[P-295-R18]

Tetrachloro-m-xylene [2C]
23J0277-01[P-295-R18]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury , VT
Sample Description:
Work Order: 23J0277

Date Received: 10/3/2023

Field Sample #: P-295-R18
Sampled: 10/2/2023 10:47

Sample ID: 23J0277-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1221 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1232 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1242 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1248 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1254 [1]	6800	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1260 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1262 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM
Aroclor-1268 [1]	ND	960	mg/Kg	10000		SW-846 8082A	10/3/23	10/6/23 7:44	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	10/6/23 7:44
Decachlorobiphenyl [2]	*	30-150	S-01	10/6/23 7:44
Tetrachloro-m-xylene [1]	*	30-150	S-01	10/6/23 7:44
Tetrachloro-m-xylene [2]	*	30-150	S-01	10/6/23 7:44

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury , VT | Sample Description: | Work Order: 23J0277

Date Received: 10/3/2023

Field Sample #: P-296-R15 | Sampled: 10/2/2023 10:37

Sample ID: 23J0277-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1221 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1232 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1242 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1248 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1254 [2]	7.6	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1260 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1262 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM
Aroclor-1268 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:15	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.0	30-150		10/6/23 4:15
Decachlorobiphenyl [2]	83.6	30-150		10/6/23 4:15
Tetrachloro-m-xylene [1]	92.7	30-150		10/6/23 4:15
Tetrachloro-m-xylene [2]	89.4	30-150		10/6/23 4:15

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury , VT | Sample Description: | Work Order: 23J0277

Date Received: 10/3/2023

Field Sample #: P-297-R15 | Sampled: 10/2/2023 10:34

Sample ID: 23J0277-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1221 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1232 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1242 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1248 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1254 [2]	13	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1260 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1262 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM
Aroclor-1268 [1]	ND	0.93	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:32	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.9	30-150		10/6/23 4:32
Decachlorobiphenyl [2]	82.8	30-150		10/6/23 4:32
Tetrachloro-m-xylene [1]	86.6	30-150		10/6/23 4:32
Tetrachloro-m-xylene [2]	85.6	30-150		10/6/23 4:32

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury , VT | Sample Description: | Work Order: 23J0277

Date Received: 10/3/2023

Field Sample #: P-298-R15 | Sampled: 10/2/2023 10:32

Sample ID: 23J0277-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1221 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1232 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1242 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1248 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1254 [2]	12	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1260 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1262 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM
Aroclor-1268 [1]	ND	0.90	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 4:50	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.9	30-150		10/6/23 4:50
Decachlorobiphenyl [2]	82.4	30-150		10/6/23 4:50
Tetrachloro-m-xylene [1]	90.7	30-150		10/6/23 4:50
Tetrachloro-m-xylene [2]	89.1	30-150		10/6/23 4:50

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury , VT | Sample Description: | Work Order: 23J0277

Date Received: 10/3/2023

Field Sample #: P-FD-016 | Sampled: 10/2/2023 11:10

Sample ID: 23J0277-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1221 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1232 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1242 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1248 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1254 [1]	1.9	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1260 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1262 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM
Aroclor-1268 [1]	ND	0.97	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:07	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.2	30-150		10/6/23 5:07
Decachlorobiphenyl [2]	77.7	30-150		10/6/23 5:07
Tetrachloro-m-xylene [1]	68.5	30-150		10/6/23 5:07
Tetrachloro-m-xylene [2]	67.8	30-150		10/6/23 5:07

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St Johnsbury , VT | Sample Description: | Work Order: 23J0277

Date Received: 10/3/2023

Field Sample #: P-FD-017 | Sampled: 10/2/2023 11:25

Sample ID: 23J0277-06

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1221 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1232 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1242 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1248 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1254 [2]	9.3	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1260 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1262 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM
Aroclor-1268 [1]	ND	0.96	mg/Kg	10		SW-846 8082A	10/3/23	10/6/23 5:24	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	53.9	30-150		10/6/23 5:24
Decachlorobiphenyl [2]	59.7	30-150		10/6/23 5:24
Tetrachloro-m-xylene [1]	73.1	30-150		10/6/23 5:24
Tetrachloro-m-xylene [2]	70.2	30-150		10/6/23 5:24

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23J0277-01 [P-295-R18]	B353838	2.09	10.0	10/03/23
23J0277-02 [P-296-R15]	B353838	2.15	10.0	10/03/23
23J0277-03 [P-297-R15]	B353838	2.14	10.0	10/03/23
23J0277-04 [P-298-R15]	B353838	2.23	10.0	10/03/23
23J0277-05 [P-FD-016]	B353838	2.07	10.0	10/03/23
23J0277-06 [P-FD-017]	B353838	2.08	10.0	10/03/23

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B353838 - SW-846 3540C										
Blank (B353838-BLK1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	ND	0.097	mg/Kg							
Aroclor-1016 [2C]	ND	0.097	mg/Kg							
Aroclor-1221	ND	0.097	mg/Kg							
Aroclor-1221 [2C]	ND	0.097	mg/Kg							
Aroclor-1232	ND	0.097	mg/Kg							
Aroclor-1232 [2C]	ND	0.097	mg/Kg							
Aroclor-1242	ND	0.097	mg/Kg							
Aroclor-1242 [2C]	ND	0.097	mg/Kg							
Aroclor-1248	ND	0.097	mg/Kg							
Aroclor-1248 [2C]	ND	0.097	mg/Kg							
Aroclor-1254	ND	0.097	mg/Kg							
Aroclor-1254 [2C]	ND	0.097	mg/Kg							
Aroclor-1260	ND	0.097	mg/Kg							
Aroclor-1260 [2C]	ND	0.097	mg/Kg							
Aroclor-1262	ND	0.097	mg/Kg							
Aroclor-1262 [2C]	ND	0.097	mg/Kg							
Aroclor-1268	ND	0.097	mg/Kg							
Aroclor-1268 [2C]	ND	0.097	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.997*		mg/Kg	0.966		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.984*		mg/Kg	0.966		102	30-150			
Surrogate: Tetrachloro-m-xylene	*0.902*		mg/Kg	0.966		93.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.889*		mg/Kg	0.966		92.0	30-150			
LCS (B353838-BS1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	0.70	0.073	mg/Kg	0.727		96.7	40-140			
Aroclor-1016 [2C]	0.63	0.073	mg/Kg	0.727		86.4	40-140			
Aroclor-1260	0.67	0.073	mg/Kg	0.727		92.2	40-140			
Aroclor-1260 [2C]	0.60	0.073	mg/Kg	0.727		83.0	40-140			
Surrogate: Decachlorobiphenyl	*0.745*		mg/Kg	0.727		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.746*		mg/Kg	0.727		103	30-150			
Surrogate: Tetrachloro-m-xylene	*0.645*		mg/Kg	0.727		88.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.639*		mg/Kg	0.727		87.9	30-150			
LCS Dup (B353838-BSD1)				Prepared: 10/03/23 Analyzed: 10/05/23						
Aroclor-1016	0.80	0.090	mg/Kg	0.901		89.0	40-140	13.1	30	
Aroclor-1016 [2C]	0.71	0.090	mg/Kg	0.901		78.6	40-140	11.9	30	
Aroclor-1260	0.77	0.090	mg/Kg	0.901		85.2	40-140	13.5	30	
Aroclor-1260 [2C]	0.70	0.090	mg/Kg	0.901		77.7	40-140	14.7	30	
Surrogate: Decachlorobiphenyl	*0.909*		mg/Kg	0.901		101	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.897*		mg/Kg	0.901		99.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.797*		mg/Kg	0.901		88.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.777*		mg/Kg	0.901		86.2	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B353838 - SW-846 3540C											
Matrix Spike (B353838-MS1)	**Source: 23J0277-02**			Prepared: 10/03/23 Analyzed: 10/06/23							
Aroclor-1016	3.3	0.98	mg/Kg	0.980	ND	**335**	*	40-140			MS-21
Aroclor-1016 [2C]	5.8	0.98	mg/Kg	0.980	ND	**593**	*	40-140			MS-21
Aroclor-1260	2.6	0.98	mg/Kg	0.980	ND	**261**	*	40-140			MS-21
Aroclor-1260 [2C]	2.9	0.98	mg/Kg	0.980	ND	**296**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.736*		mg/Kg	0.980		75.1		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.789*		mg/Kg	0.980		80.5		30-150			
Surrogate: Tetrachloro-m-xylene	*0.885*		mg/Kg	0.980		90.3		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.854*		mg/Kg	0.980		87.1		30-150			
Matrix Spike Dup (B353838-MSD1)	**Source: 23J0277-02**			Prepared: 10/03/23 Analyzed: 10/06/23							
Aroclor-1016	3.3	0.99	mg/Kg	0.990	ND	**330**	*	40-140	0.439	50	MS-21
Aroclor-1016 [2C]	5.6	0.99	mg/Kg	0.990	ND	**564**	*	40-140	4.03	50	MS-21
Aroclor-1260	2.5	0.99	mg/Kg	0.990	ND	**256**	*	40-140	1.03	50	MS-21
Aroclor-1260 [2C]	2.8	0.99	mg/Kg	0.990	ND	**285**	*	40-140	2.83	50	MS-21
Surrogate: Decachlorobiphenyl	*0.773*		mg/Kg	0.990		78.0		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.812*		mg/Kg	0.990		82.0		30-150			
Surrogate: Tetrachloro-m-xylene	*0.908*		mg/Kg	0.990		91.7		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.884*		mg/Kg	0.990		89.3		30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-295-R18

Lab Sample ID: 23J0277-01 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	6800	
	2	0.000	0.000	0.000	6200	9.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-296-R15

Lab Sample ID: 23J0277-02 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.0	
	2	0.000	0.000	0.000	7.6	8.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-297-R15

Lab Sample ID: 23J0277-03 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	12	
	2	0.000	0.000	0.000	13	8.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-298-R15

Lab Sample ID: 23J0277-04 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	11	
	2	0.000	0.000	0.000	12	8.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-016

Lab Sample ID: 23J0277-05 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	1.9	
	2	0.000	0.000	0.000	1.7	11.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD-017

Lab Sample ID: 23J0277-06

Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3

Instrument ID (2): ECD3

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.0	
	2	0.000	0.000	0.000	9.3	28.2

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B353838-BS1 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.70	
	2	0.000	0.000	0.000	0.63	10.5
Aroclor-1260	1	0.000	0.000	0.000	0.67	
	2	0.000	0.000	0.000	0.60	11.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B353838-BSD1 Date(s) Analyzed: 10/05/2023 10/05/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.71	11.9
Aroclor-1260	1	0.000	0.000	0.000	0.77	
	2	0.000	0.000	0.000	0.70	9.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B353838-MS1 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	3.3	
	2	0.000	0.000	0.000	5.8	54.9
Aroclor-1260	1	0.000	0.000	0.000	2.6	
	2	0.000	0.000	0.000	2.9	10.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B353838-MSD1 Date(s) Analyzed: 10/06/2023 10/06/2023

Instrument ID (1): ECD3 Instrument ID (2): ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	3.3	
	2	0.000	0.000	0.000	5.6	51.7
Aroclor-1260	1	0.000	0.000	0.000	2.5	
	2	0.000	0.000	0.000	2.8	11.3

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23J0277
RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code[1]	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-295-R18	10/2/2023	10:47	GRAB	O	U		1				x
2	P-296-R15	10/2/2023	10:37	GRAB	O	U		1				x
3	P-297-R15	10/2/2023	10:34	GRAB	O	U		1				x
4	P-298-R15	10/2/2023	10:32	GRAB	O	U		1				x
5	P-FD-016	10/2/2023	11:10	GRAB	O	U		1				x
6	P-FD-017	10/2/2023	11:25	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) John Maddigan	Date/Time: 10/2/23 14:18
Received by: (signature) 3.2°C	Date/Time: CHO 10-3-23
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. T Chain of Custody is a legal document that must be complete and accurate and is used to determine w analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. P Analytical values your partnership on each project and will try to assist with missing information, but not be held accountable.

Table of Contents

Fed Sign

FedEx® Tracking Track Another Shipment Local Scan Time Help

DELIVERED

Tuesday

10/3/23 at 9:40 AM

Signed for by: C.HENRIQUEZ

Obtain proof of delivery

How was your delivery?

TRACKING ID

784507670139

DELIVERY STATUS

Delivered

FROM
Craftsbury Common, VT US
Label Created
10/2/23 1:23 PM

WE HAVE YOUR PACKAGE
SAINT JOHNSBURY, VT
10/2/23 2:23 PM

IN TRANSIT
WINDSOR LOCKS, CT
10/3/23 7:52 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
10/3/23 8:00 AM

DELIVERED
EAST LONGMEADOW, MA US
Delivered
10/3/23 at 9:40 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL
Contestlab39

SUBMIT

MORE OPTIONS

Manage Delivery

Shipment facts

Shipment overview

TRACKING NUMBER	784507670139
DELIVERED TO	Shipping/Receiving
SHIP DATE	10/2/23

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis Group

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AAM/10-3-23/0940

Back-Sheet By / Date / Time AAM/10-3-23/1402

Temperature Method Temp. Gun # 5

Temp ✓ < 6° C Actual Temperature 3.2°C

Rush Samples: (Yes) / No Notify Ext teams

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

work order was split after the first 20 Samples

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑	☐
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Quattrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)			Ambers							Plastics												VOA Vials					Other / Fill in			
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			100mL	1 Liter		500mL		250mL															
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact			
1																															
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															
17																															
18																															
19																															
20																															

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 14, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23J4090

Enclosed are results of analyses for samples as received by the laboratory on October 31, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23J4090-01 5

23J4090-02 6

23J4090-03 7

23J4090-04 8

23J4090-05 9

23J4090-06 10

23J4090-07 11

Sample Preparation Information 12

QC Data 13

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 13

B357801 13

Dual Column RPD Report 14

Flag/Qualifier Summary 16

Certifications 17

Chain of Custody/Sample Receipt 18

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/14/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23J4090

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

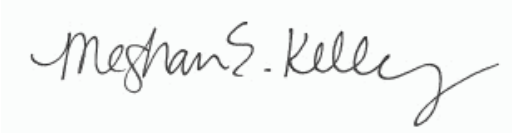
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-299-Ex	23J4090-01	Product/Solid		SW-846 8082A	
P-300-Ex	23J4090-02	Product/Solid		SW-846 8082A	
P-301-Ex	23J4090-03	Product/Solid		SW-846 8082A	
P-302-Ex	23J4090-04	Product/Solid		SW-846 8082A	
P-303-Ex	23J4090-05	Product/Solid		SW-846 8082A	
P-304-Ex	23J4090-06	Product/Solid		SW-846 8082A	
P-FD-018	23J4090-07	Product/Solid		SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-299-Ex | Sampled: 10/25/2023 11:20

Sample ID: 23J4090-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1221 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1232 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1242 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1248 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1254 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1260 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1262 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4
Aroclor-1268 [1]	ND	0.087	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:22	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.4	30-150		11/13/23 12:22
Decachlorobiphenyl [2]	76.4	30-150		11/13/23 12:22
Tetrachloro-m-xylene [1]	91.9	30-150		11/13/23 12:22
Tetrachloro-m-xylene [2]	87.4	30-150		11/13/23 12:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-300-Ex | Sampled: 10/25/2023 11:10

Sample ID: 23J4090-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1221 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1232 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1242 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1248 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1254 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1260 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1262 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4
Aroclor-1268 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:40	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.5	30-150		11/13/23 12:40
Decachlorobiphenyl [2]	78.1	30-150		11/13/23 12:40
Tetrachloro-m-xylene [1]	91.6	30-150		11/13/23 12:40
Tetrachloro-m-xylene [2]	87.2	30-150		11/13/23 12:40

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-301-Ex | Sampled: 10/25/2023 11:30

Sample ID: 23J4090-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1221 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1232 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1242 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1248 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1254 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1260 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1262 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4
Aroclor-1268 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 12:57	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.1	30-150		11/13/23 12:57
Decachlorobiphenyl [2]	76.8	30-150		11/13/23 12:57
Tetrachloro-m-xylene [1]	94.2	30-150		11/13/23 12:57
Tetrachloro-m-xylene [2]	90.4	30-150		11/13/23 12:57

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-302-Ex | Sampled: 10/25/2023 11:40

Sample ID: 23J4090-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1221 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1232 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1242 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1248 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1254 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1260 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1262 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4
Aroclor-1268 [1]	ND	0.096	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:14	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.7	30-150		11/13/23 13:14
Decachlorobiphenyl [2]	79.6	30-150		11/13/23 13:14
Tetrachloro-m-xylene [1]	93.3	30-150		11/13/23 13:14
Tetrachloro-m-xylene [2]	89.6	30-150		11/13/23 13:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-303-Ex | Sampled: 10/25/2023 11:50

Sample ID: 23J4090-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1221 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1232 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1242 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1248 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1254 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1260 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1262 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4
Aroclor-1268 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:31	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.6	30-150		11/13/23 13:31
Decachlorobiphenyl [2]	79.4	30-150		11/13/23 13:31
Tetrachloro-m-xylene [1]	93.5	30-150		11/13/23 13:31
Tetrachloro-m-xylene [2]	89.4	30-150		11/13/23 13:31

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-304-Ex | Sampled: 10/25/2023 12:00

Sample ID: 23J4090-06

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1221 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1232 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1242 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1248 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1254 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1260 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1262 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4
Aroclor-1268 [1]	ND	0.092	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 13:48	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.8	30-150		11/13/23 13:48
Decachlorobiphenyl [2]	79.3	30-150		11/13/23 13:48
Tetrachloro-m-xylene [1]	94.5	30-150		11/13/23 13:48
Tetrachloro-m-xylene [2]	90.5	30-150		11/13/23 13:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4090

Date Received: 10/31/2023

Field Sample #: P-FD-018 | Sampled: 10/25/2023 12:10

Sample ID: 23J4090-07

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1221 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1232 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1242 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1248 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1254 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1260 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1262 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4
Aroclor-1268 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	11/10/23	11/13/23 14:05	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.2	30-150		11/13/23 14:05
Decachlorobiphenyl [2]	81.8	30-150		11/13/23 14:05
Tetrachloro-m-xylene [1]	96.5	30-150		11/13/23 14:05
Tetrachloro-m-xylene [2]	93.0	30-150		11/13/23 14:05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23J4090-01RE1 [P-299-Ex]	B357801	2.31	10.0	11/10/23
23J4090-02RE1 [P-300-Ex]	B357801	2.05	10.0	11/10/23
23J4090-03RE1 [P-301-Ex]	B357801	2.09	10.0	11/10/23
23J4090-04RE1 [P-302-Ex]	B357801	2.09	10.0	11/10/23
23J4090-05RE1 [P-303-Ex]	B357801	2.07	10.0	11/10/23
23J4090-06RE1 [P-304-Ex]	B357801	2.17	10.0	11/10/23
23J4090-07RE1 [P-FD-018]	B357801	2.04	10.0	11/10/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357801 - SW-846 3540C										
Blank (B357801-BLK1)				Prepared: 11/10/23 Analyzed: 11/13/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.722*		mg/Kg	1.00		72.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.757*		mg/Kg	1.00		75.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.931*		mg/Kg	1.00		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.888*		mg/Kg	1.00		88.8	30-150			
LCS (B357801-BS1)				Prepared: 11/10/23 Analyzed: 11/13/23						
Aroclor-1016	0.80	0.10	mg/Kg	1.00		79.8	40-140			
Aroclor-1016 [2C]	0.84	0.10	mg/Kg	1.00		83.9	40-140			
Aroclor-1260	0.80	0.10	mg/Kg	1.00		80.5	40-140			
Aroclor-1260 [2C]	0.76	0.10	mg/Kg	1.00		76.4	40-140			
Surrogate: Decachlorobiphenyl	*0.735*		mg/Kg	1.00		73.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.777*		mg/Kg	1.00		77.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.941*		mg/Kg	1.00		94.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.900*		mg/Kg	1.00		90.0	30-150			
LCS Dup (B357801-BSD1)				Prepared: 11/10/23 Analyzed: 11/13/23						
Aroclor-1016	0.79	0.10	mg/Kg	1.00		79.3	40-140	0.637	30	
Aroclor-1016 [2C]	0.83	0.10	mg/Kg	1.00		83.4	40-140	0.628	30	
Aroclor-1260	0.81	0.10	mg/Kg	1.00		81.1	40-140	0.743	30	
Aroclor-1260 [2C]	0.76	0.10	mg/Kg	1.00		76.5	40-140	0.0844	30	
Surrogate: Decachlorobiphenyl	*0.738*		mg/Kg	1.00		73.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.766*		mg/Kg	1.00		76.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.925*		mg/Kg	1.00		92.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.886*		mg/Kg	1.00		88.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357801-BS1

Date(s) Analyzed: 11/13/2023 11/13/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.84	4.9
Aroclor-1260	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.76	6.4

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357801-BSD1 Date(s) Analyzed: 11/13/2023 11/13/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.79	
	2	0.000	0.000	0.000	0.83	4.9
Aroclor-1260	1	0.000	0.000	0.000	0.81	
	2	0.000	0.000	0.000	0.76	6.4

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23J4090 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number:	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-299-Ex	10/25/2023	11:20	GRAB	O	U		1				x	
2	P-300-Ex	10/25/2023	11:10	GRAB	O	U		1				x	
3	P-301-Ex	10/25/2023	11:30	GRAB	O	U		1				x	
4	P-302-Ex	10/25/2023	11:40	GRAB	O	U		1				x	
5	P-303-Ex	10/25/2023	11:50	GRAB	O	U		1				x	
6	P-304-Ex	10/25/2023	12:00	GRAB	O	U		1				x	
7	P-FD-018	10/25/2023	12:10	GRAB	O	U		1				x	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 10/27/23 4:30PM	Client Comments:
Received by: (signature)	Date/Time: 10/31/23 1435	
Relinquished by: (signature)	Date/Time: 10/31/23 1912	
Received by: (signature)	Date/Time: 10/31/23 1912	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: MCM 10/31/23 1912

Back-Sheet By / Date / Time: MCM 10/31/23 2055

Temperature Method: Gun # 4

Temp < 6° C Actual Temperature: 20

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

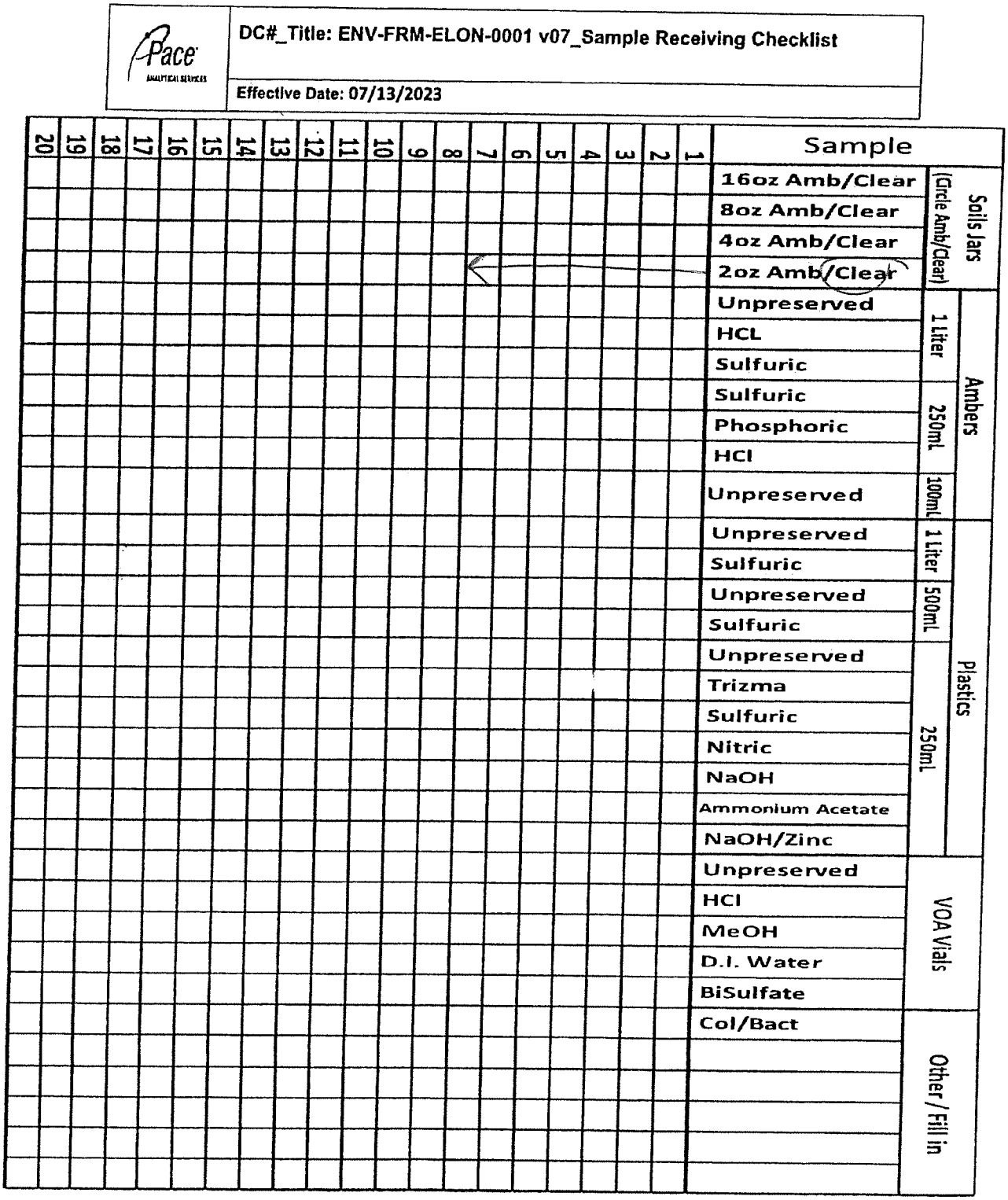
Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.



DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample			
1	16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars
2	8oz Amb/Clear		
3	4oz Amb/Clear		
4	2oz Amb/Clear		
5	Unpreserved	1 Liter	Ambers
6	HCL		
7	Sulfuric		
8	Sulfuric	250mL	
9	Phosphoric		
10	HCl		
11	Unpreserved	100mL	
12	Unpreserved	1 Liter	Plastics
13	Sulfuric		
14	Unpreserved	500mL	
15	Sulfuric		
16	Unpreserved	250mL	
17	Trizma		
18	Sulfuric		
19	Nitric		
20	NaOH		
	Ammonium Acetate		
	NaOH/Zinc		
	Unpreserved		VOA Vials
	HCl		
	MeOH		
	D.I. Water		
	BiSulfate		
	Col/Bact		Other / Fill in

Qualtrax ID: 120836

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 27, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K1921

Enclosed are results of analyses for samples as received by the laboratory on November 14, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K1921-01 5

23K1921-02 6

23K1921-03 7

Sample Preparation Information 8

QC Data 9

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 9

B358566 9

Dual Column RPD Report 11

Flag/Qualifier Summary 15

Certifications 16

Chain of Custody/Sample Receipt 17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/27/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K1921

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-329-Ex	23K1921-01	Product/Solid		SW-846 8082A	
P-330-Ex	23K1921-02	Product/Solid		SW-846 8082A	
P-331-Ex	23K1921-03	Product/Solid		SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K1921

Date Received: 11/14/2023

Field Sample #: P-329-Ex | Sampled: 11/2/2023 11:09

Sample ID: 23K1921-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1221 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1232 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1242 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1248 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1254 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1260 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1262 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG
Aroclor-1268 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 19:48	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.5	30-150		11/22/23 19:48
Decachlorobiphenyl [2]	96.9	30-150		11/22/23 19:48
Tetrachloro-m-xylene [1]	79.1	30-150		11/22/23 19:48
Tetrachloro-m-xylene [2]	76.4	30-150		11/22/23 19:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K1921

Date Received: 11/14/2023

Field Sample #: P-330-Ex | Sampled: 11/2/2023 11:10

Sample ID: 23K1921-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1221 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1232 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1242 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1248 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1254 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1260 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1262 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG
Aroclor-1268 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:05	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.3	30-150		11/22/23 20:05
Decachlorobiphenyl [2]	99.4	30-150		11/22/23 20:05
Tetrachloro-m-xylene [1]	96.1	30-150		11/22/23 20:05
Tetrachloro-m-xylene [2]	93.3	30-150		11/22/23 20:05

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K1921

Date Received: 11/14/2023

Field Sample #: P-331-Ex | Sampled: 11/2/2023 11:11

Sample ID: 23K1921-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1221 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1232 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1242 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1248 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1254 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1260 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1262 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG
Aroclor-1268 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	11/20/23	11/22/23 20:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.5	30-150		11/22/23 20:22
Decachlorobiphenyl [2]	97.0	30-150		11/22/23 20:22
Tetrachloro-m-xylene [1]	87.2	30-150		11/22/23 20:22
Tetrachloro-m-xylene [2]	84.2	30-150		11/22/23 20:22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1921-01 [P-329-Ex]	B358566	2.03	10.0	11/20/23
23K1921-02 [P-330-Ex]	B358566	2.03	10.0	11/20/23
23K1921-03 [P-331-Ex]	B358566	2.02	10.0	11/20/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358566 - SW-846 3540C										
Blank (B358566-BLK1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.869*		mg/Kg	1.00		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.934*		mg/Kg	1.00		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.921*		mg/Kg	1.00		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.918*		mg/Kg	1.00		91.8	30-150			
LCS (B358566-BS1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Aroclor-1016	0.73	0.10	mg/Kg	0.995		73.2	40-140			
Aroclor-1016 [2C]	0.76	0.10	mg/Kg	0.995		76.8	40-140			
Aroclor-1260	0.75	0.10	mg/Kg	0.995		75.7	40-140			
Aroclor-1260 [2C]	0.80	0.10	mg/Kg	0.995		80.5	40-140			
Surrogate: Decachlorobiphenyl	*0.838*		mg/Kg	0.995		84.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.905*		mg/Kg	0.995		90.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.894*		mg/Kg	0.995		89.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.888*		mg/Kg	0.995		89.3	30-150			
LCS Dup (B358566-BSD1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Aroclor-1016	0.73	0.099	mg/Kg	0.985		74.3	40-140	0.520	30	
Aroclor-1016 [2C]	0.77	0.099	mg/Kg	0.985		78.1	40-140	0.640	30	
Aroclor-1260	0.77	0.099	mg/Kg	0.985		78.3	40-140	2.33	30	
Aroclor-1260 [2C]	0.81	0.099	mg/Kg	0.985		82.3	40-140	1.18	30	
Surrogate: Decachlorobiphenyl	*0.820*		mg/Kg	0.985		83.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.883*		mg/Kg	0.985		89.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.870*		mg/Kg	0.985		88.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.854*		mg/Kg	0.985		86.7	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358566 - SW-846 3540C										
Matrix Spike (B358566-MS1)	**Source: 23K1921-01**			Prepared: 11/20/23 Analyzed: 11/22/23						
Aroclor-1016	0.80	0.099	mg/Kg	0.985	ND	81.6	40-140			
Aroclor-1016 [2C]	0.82	0.099	mg/Kg	0.985	ND	83.6	40-140			
Aroclor-1260	0.84	0.099	mg/Kg	0.985	ND	85.2	40-140			
Aroclor-1260 [2C]	0.87	0.099	mg/Kg	0.985	ND	88.5	40-140			
Surrogate: Decachlorobiphenyl	*0.878*		mg/Kg	0.985		89.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.939*		mg/Kg	0.985		95.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.878*		mg/Kg	0.985		89.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.856*		mg/Kg	0.985		86.9	30-150			
Matrix Spike Dup (B358566-MSD1)	**Source: 23K1921-01**			Prepared: 11/20/23 Analyzed: 11/22/23						
Aroclor-1016	0.81	0.099	mg/Kg	0.990	ND	81.6	40-140	0.425	50	
Aroclor-1016 [2C]	0.83	0.099	mg/Kg	0.990	ND	83.6	40-140	0.396	50	
Aroclor-1260	0.85	0.099	mg/Kg	0.990	ND	85.8	40-140	1.13	50	
Aroclor-1260 [2C]	0.88	0.099	mg/Kg	0.990	ND	88.9	40-140	0.998	50	
Surrogate: Decachlorobiphenyl	*0.914*		mg/Kg	0.990		92.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.975*		mg/Kg	0.990		98.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.922*		mg/Kg	0.990		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.897*		mg/Kg	0.990		90.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B358566-BS1

Date(s) Analyzed: 11/21/2023 11/21/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.73	
	2	0.000	0.000	0.000	0.76	4.0
Aroclor-1260	1	0.000	0.000	0.000	0.75	
	2	0.000	0.000	0.000	0.80	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B358566-BSD1 Date(s) Analyzed: 11/21/2023 11/21/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.73	
	2	0.000	0.000	0.000	0.77	5.3
Aroclor-1260	1	0.000	0.000	0.000	0.77	
	2	0.000	0.000	0.000	0.81	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B358566-MS1 Date(s) Analyzed: 11/22/2023 11/22/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.80	
	2	0.000	0.000	0.000	0.82	2.5
Aroclor-1260	1	0.000	0.000	0.000	0.84	
	2	0.000	0.000	0.000	0.87	3.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B358566-MSD1 Date(s) Analyzed: 11/22/2023 11/22/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.81	
	2	0.000	0.000	0.000	0.83	2.4
Aroclor-1260	1	0.000	0.000	0.000	0.85	
	2	0.000	0.000	0.000	0.88	3.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K1921

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
	P-328-Ex-06.507	11/2/2023	10:58			U		1				H	
	P-328-Ex-0707.5	11/2/2023	10:59			U		1				H	
	P-328-Ex-07.508	11/2/2023	11:00			U		1				H	
	P-328-Ex-0808.5	11/2/2023	11:01			U		1				H	
	P-328-Ex-08.509	11/2/2023	11:02			U		1				H	
	P-328-Ex-0909.5	11/2/2023	11:03			U		1				H	
	P-328-Ex-09.510	11/2/2023	11:04			U		1				H	
	P-328-Ex-1010.5	11/2/2023	11:05			U		1				H	
	P-328-Ex-10.511	11/2/2023	11:06			U		1				H	
	P-328-Ex-1112	11/2/2023	11:07			U		3				H	

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Per client, P-329-Ex, P-330-Ex & P-331-Ex are to be analyzed.

-RLF 11/14/23

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
01	P-329-Ex	11/2/2023	11:09			U		1				H	
02	P-330-Ex	11/2/2023	11::10			U		1				H	
03	P-331-Ex	11/2/2023	11:11			U		1				H	
	P-FD019	11/1/2023	8:00			U		1				H	
	P-FD020	11/1/2023	8:01			U		1				H	
	P-FD021	11/1/2023	8:02			U		1				H	
	P-FD022	11/1/2023	8:03			U		1				H	
	P-FD023	11/1/2023	8:04			U		1				H	
	P-FD024	11/1/2023	8:05			U		1				X	
	P-FD025	11/1/2023	8:06			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time Mcm 11/6/23 1430

Back-Sheet By / Date / Time Mcm 11/6/23 2135

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 2.5

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			1									3	1									
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

Qualtrax ID: 120836

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 7, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23L0356

Enclosed are results of analyses for samples as received by the laboratory on December 4, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23L0356-01 5

23L0356-02 6

23L0356-03 7

Sample Preparation Information 8

QC Data 9

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 9

B359751 9

Dual Column RPD Report 10

Flag/Qualifier Summary 12

Certifications 13

Chain of Custody/Sample Receipt 14

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 12/7/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23L0356

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-332-EX	23L0356-01	Product/Solid		SW-846 8082A	
P-333-EX	23L0356-02	Product/Solid		SW-846 8082A	
P-334-EX	23L0356-03	Product/Solid		SW-846 8082A	

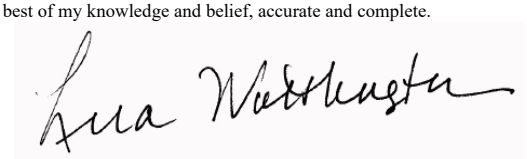
con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23L0356

Date Received: 12/4/2023

Field Sample #: P-332-EX | Sampled: 12/4/2023 10:30

Sample ID: 23L0356-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1221 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1232 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1242 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1248 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1254 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1260 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1262 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4
Aroclor-1268 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:07	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.7	30-150		12/6/23 15:07
Decachlorobiphenyl [2]	86.8	30-150		12/6/23 15:07
Tetrachloro-m-xylene [1]	78.1	30-150		12/6/23 15:07
Tetrachloro-m-xylene [2]	78.8	30-150		12/6/23 15:07

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23L0356

Date Received: 12/4/2023

Field Sample #: P-333-EX | Sampled: 12/4/2023 10:50

Sample ID: 23L0356-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1221 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1232 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1242 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1248 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1254 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1260 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1262 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4
Aroclor-1268 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:25	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.9	30-150		12/6/23 15:25
Decachlorobiphenyl [2]	97.0	30-150		12/6/23 15:25
Tetrachloro-m-xylene [1]	88.2	30-150		12/6/23 15:25
Tetrachloro-m-xylene [2]	89.4	30-150		12/6/23 15:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23L0356

Date Received: 12/4/2023

Field Sample #: P-334-EX | Sampled: 12/4/2023 11:15

Sample ID: 23L0356-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1221 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1232 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1242 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1248 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1254 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1260 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1262 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4
Aroclor-1268 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	12/5/23	12/6/23 15:42	JM4

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.6	30-150		12/6/23 15:42
Decachlorobiphenyl [2]	99.3	30-150		12/6/23 15:42
Tetrachloro-m-xylene [1]	92.6	30-150		12/6/23 15:42
Tetrachloro-m-xylene [2]	94.7	30-150		12/6/23 15:42

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23L0356-01 [P-332-EX]	B359751	2.20	10.0	12/05/23
23L0356-02 [P-333-EX]	B359751	2.10	10.0	12/05/23
23L0356-03 [P-334-EX]	B359751	2.10	10.0	12/05/23

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359751 - SW-846 3540C										
Blank (B359751-BLK1)				Prepared: 12/05/23 Analyzed: 12/06/23						
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	*0.986*		mg/Kg	1.00		98.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.991*		mg/Kg	1.00		99.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.937*		mg/Kg	1.00		93.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.966*		mg/Kg	1.00		96.6	30-150			
LCS (B359751-BS1)				Prepared: 12/05/23 Analyzed: 12/06/23						
Aroclor-1016	0.78	0.10	mg/Kg	1.00		78.4	40-140			
Aroclor-1016 [2C]	0.90	0.10	mg/Kg	1.00		89.7	40-140			
Aroclor-1260	0.83	0.10	mg/Kg	1.00		83.2	40-140			
Aroclor-1260 [2C]	0.87	0.10	mg/Kg	1.00		86.6	40-140			
Surrogate: Decachlorobiphenyl	*0.969*		mg/Kg	1.00		96.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.985*		mg/Kg	1.00		98.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.954*		mg/Kg	1.00		95.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.981*		mg/Kg	1.00		98.1	30-150			
LCS Dup (B359751-BSD1)				Prepared: 12/05/23 Analyzed: 12/06/23						
Aroclor-1016	0.78	0.10	mg/Kg	1.00		78.1	40-140	0.364	30	
Aroclor-1016 [2C]	0.92	0.10	mg/Kg	1.00		92.3	40-140	2.81	30	
Aroclor-1260	0.84	0.10	mg/Kg	1.00		84.3	40-140	1.25	30	
Aroclor-1260 [2C]	0.88	0.10	mg/Kg	1.00		87.5	40-140	1.04	30	
Surrogate: Decachlorobiphenyl	*0.972*		mg/Kg	1.00		97.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.985*		mg/Kg	1.00		98.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.937*		mg/Kg	1.00		93.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.958*		mg/Kg	1.00		95.8	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B359751-BS1

Date(s) Analyzed: 12/06/2023 12/06/2023

Instrument ID (1): ECD11

Instrument ID (2): ECD11

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.78	
	2	0.000	0.000	0.000	0.90	14.3
Aroclor-1260	1	0.000	0.000	0.000	0.83	
	2	0.000	0.000	0.000	0.87	4.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B359751-BSD1 Date(s) Analyzed: 12/06/2023 12/06/2023

Instrument ID (1): ECD11 Instrument ID (2): ECD11

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.78	
	2	0.000	0.000	0.000	0.92	16.5
Aroclor-1260	1	0.000	0.000	0.000	0.84	
	2	0.000	0.000	0.000	0.88	4.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23L0356 RT

Pace Analytical

Phone: 413-525-2332
Fax: 413-525-6405
http://www.pacelabs.com
39 Spruce Street
East Longmeadow, MA 01028

Access COC's and Support Requests

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 5_07/13/2021

Company Name:	Nobis Group
Address:	18 Chenell Drive, Concord NH
Phone:	
Project Name:	St. Johnsbury Armory
Project Location:	St. Johnsbury VT
Project Number:	50000.017
Project Manager:	Tim Andrews
Pace Quote Name/Number:	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time			
7-Day	☐	10-Day	☐
PFAS 10-Day (std)	☐	Due Date:	12/8

Rush-Approval Required			
1-Day	☐	3-Day	☒
2-Day	☐	4-Day	☐

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: EQuIS EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet												
1	P-332-Ex	12/3/23	10:30	G	SOL	U		1				✓												
2	P-333-Ex	↓	10:50	G	SOL	U		1				✓												
3	P-334-Ex	↓	11:15	G	SOL	U		1				✓												

Relinquished by: (signature)	Date/Time: 12/4/23 13:20	Client Comments:
Received by: (signature)	Date/Time: 12/4/23 1320	
Relinquished by: (signature)	Date/Time: 12/4/23 17:20	
Received by: (signature) 3.8	Date/Time: 12/4 1720	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements		Special Requirements	
MA		☐	MA MCP Required
			MCP Certification Form Required
CT		☐	CT RCP Required
			RCP Certification Form Required
Other:		☐	MA State DW Required
		PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis (NH)

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MCM 12/4/23 1320

Back-Sheet By / Date / Time MCM 12/4/23 1755

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 3.8

Rush Samples: Yes / No Notify Yes Ext. Teams

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample		
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)	
8oz Amb/Clear		
4oz Amb/Clear		
2oz Amb/Clear		
Unpreserved	Ambers	1 Liter
HCL		
Sulfuric		
Sulfuric		250mL
Phosphoric		
HCl		
Unpreserved		100mL
Unpreserved	Plastics	1 Liter
Sulfuric		
Unpreserved		500mL
Sulfuric		
Unpreserved		250mL
Trizma		
Sulfuric		
Nitric		
NaOH		
Ammonium Acetate		
NaOH/Zinc		
Unpreserved	VOA Vials	
HCl		
MeOH		
D.I. Water		
BiSulfate		
Col/Bact	Other / Fill in	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23J4095

Enclosed are results of analyses for samples as received by the laboratory on October 31, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23J4095-01 5

23J4095-02 6

23J4095-03 7

23J4095-04 8

23J4095-05 9

23J4095-06 10

Sample Preparation Information 11

QC Data 12

TCLP - Metals Analyses 12

B357667 12

Flag/Qualifier Summary 13

Certifications 14

Chain of Custody/Sample Receipt 15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23J4095

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

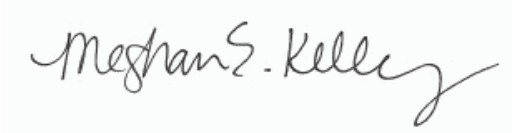
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WC-Lead-Comp-1	23J4095-01	Paint		SW-846 6010D	
WC-Lead-Comp-2	23J4095-02	Paint		SW-846 6010D	
WC-Lead-Comp-3	23J4095-03	Paint		SW-846 6010D	
WC-Lead-Comp-4	23J4095-04	Paint		SW-846 6010D	
WC-Lead-Comp-5	23J4095-05	Paint		SW-846 6010D	
WC-Lead-Comp-Field Dup	23J4095-06	Paint		SW-846 6010D	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4095

Date Received: 10/31/2023

Field Sample #: WC-Lead-Comp-1 | Sampled: 10/25/2023 10:10

Sample ID: 23J4095-01

Sample Matrix: Paint

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	5.7	0.10	mg/L	1		SW-846 6010D	11/9/23	11/10/23 17:39	MJH

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4095

Date Received: 10/31/2023

Field Sample #: WC-Lead-Comp-2 | Sampled: 10/25/2023 10:15

Sample ID: 23J4095-02

Sample Matrix: Paint

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	15	0.10	mg/L	1		SW-846 6010D	11/9/23	11/10/23 17:47	MJH

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4095

Date Received: 10/31/2023

Field Sample #: WC-Lead-Comp-3 | Sampled: 10/25/2023 10:25

Sample ID: 23J4095-03

Sample Matrix: Paint

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	28	0.10	mg/L	1		SW-846 6010D	11/9/23	11/10/23 17:55	MJH

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4095

Date Received: 10/31/2023

Field Sample #: WC-Lead-Comp-4 | Sampled: 10/25/2023 10:35

Sample ID: 23J4095-04

Sample Matrix: Paint

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	0.21	0.10	mg/L	1		SW-846 6010D	11/9/23	11/10/23 18:03	MJH

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4095

Date Received: 10/31/2023

Field Sample #: WC-Lead-Comp-5 | Sampled: 10/25/2023 10:45

Sample ID: 23J4095-05

Sample Matrix: Paint

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	0.63	0.10	mg/L	1		SW-846 6010D	11/9/23	11/10/23 18:11	MJH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23J4095

Date Received: 10/31/2023

Field Sample #: WC-Lead-Comp-Field Dup | Sampled: 10/25/2023 10:50

Sample ID: 23J4095-06

Sample Matrix: Paint

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	0.99	0.10	mg/L	1		SW-846 6010D	11/9/23	11/10/23 18:18	MJH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3010A **Analytical Method:SW-846 6010D** **Leachates were extracted on 11/8/2023 per SW-846 1311 in Batch B357517**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23J4095-01 [WC-Lead-Comp-1]	B357667	50.0	50.0	11/09/23
23J4095-02 [WC-Lead-Comp-2]	B357667	50.0	50.0	11/09/23
23J4095-03 [WC-Lead-Comp-3]	B357667	50.0	50.0	11/09/23
23J4095-04 [WC-Lead-Comp-4]	B357667	50.0	50.0	11/09/23
23J4095-05 [WC-Lead-Comp-5]	B357667	50.0	50.0	11/09/23
23J4095-06 [WC-Lead-Comp-Field Dup]	B357667	50.0	50.0	11/09/23

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357667 - SW-846 3010A										
Blank (B357667-BLK1)				Prepared: 11/09/23 Analyzed: 11/10/23						
Lead	ND	0.10	mg/L							
LCS (B357667-BS1)				Prepared: 11/09/23 Analyzed: 11/10/23						
Lead	0.485	0.10	mg/L	0.500		96.9	80-120			
LCS Dup (B357667-BSD1)				Prepared: 11/09/23 Analyzed: 11/10/23						
Lead	0.475	0.10	mg/L	0.500		95.0	80-120	1.98	20	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Lead	NY,CT,ME,NC,NH,VA
SW-846 6010D in Water	
Lead	NY,CT,ME,NC,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023

23J4095 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	TCLP Lead
1	WC-Lead-Comp-1	10/25/2023	10:10	COMP	O	U		1				x
2	WC-Lead-Comp-2	10/25/2023	10:15	COMP	O	U		1				x
3	WC-Lead-Comp-3	10/25/2023	10:25	COMP	O	U		1				x
4	WC-Lead-Comp-4	10/25/2023	10:35	COMP	O	U		1				x
5	WC-Lead-Comp-5	10/25/2023	10:45	COMP	O	U		1				x
6	WC-Lead-Comp-Field Dup	10/25/2023	10:50	COMP	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

	Date/Time:
Relinquished by: (signature)	10/27/23 4:30PM
Received by: (signature)	10/31/23 1432
Relinquished by: (signature)	10/31/23 1902
Received by: (signature)	10/31/23 1912
Relinquished by: (signature)	
Received by: (signature)	
Relinquished by: (signature)	
Received by: (signature)	

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 10/31/23 1916

Back-Sheet By / Date / Time: Mcm 10/31/23 2157

Temperature Method: Gun # 4

Temp < 6° C Actual Temperature: 3.6

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample			
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)		
8oz Amb/Clear			
4oz Amb/Clear			
2oz Amb/Clear			
Unpreserved	Ambers	1 Liter	
HCL			
Sulfuric			
Sulfuric		250mL	
Phosphoric			
HCl			
Unpreserved		100mL	
Unpreserved	Plastics	1 Liter	
Sulfuric			
Unpreserved		500mL	
Sulfuric			
Unpreserved		250mL	
Trizma			
Sulfuric			
Nitric			
NaOH			
Ammonium Acetate			
NaOH/Zinc			
Unpreserved	VOA Vials		
HCl			
MeOH			
D.I. Water			
BiSulfate			
Col/Bact	Other / Fill in		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
-	-	-	-	-	-														

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	132305450
Customer ID:	NOBI51
Customer PO:	
Project ID:	

Attention:	Bridget Fortier	**Phone:**	(978) 683-0891
	Nobis Engineering, Inc.	**Fax:**	(978) 683-0966
	585 Middlesex Street	**Received Date:**	08/22/2023 2:55 PM
	Lowell, MA 01851	**Analysis Date:**	08/29/2023
		Collected Date:	
Project:	St. Johnsbury Armory		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-001A-R22 *132305450-0001*	Room 22 - Yellow Mastic on Concrete	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-001B-R27 *132305450-0002*	Room 27 - Yellow Mastic on Concrete	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-002A-R10 *132305450-0003*	Room 10 - Cellotex Board	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-002B-R06 *132305450-0004*	Room 06 - Cellotex Board	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-003A-R10 *132305450-0005*	Room 10 - Thin Wall Panels	Brown/White Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
A-003B-R16 *132305450-0006*	Room 16 - Thin Wall Panels	Brown/White Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
A-004A-R23 *132305450-0007*	Room 23 - Tile Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-004B-R23 *132305450-0008*	Room 23 - Tile Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-005A-R14 *132305450-0009*	Room 14 - White Sub-Floor Plaster-like Filler	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-005B-R14 *132305450-0010*	Room 14 - White Sub-Floor Plaster-like Filler	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-006A-R5 *132305450-0011*	Room 5 - Gray Adhesive on Brown Paneling	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
A-006B-R5 *132305450-0012*	Room 5 - Gray Adhesive on Brown Paneling				Positive Stop (Not Analyzed)
A-006C-R5 *132305450-0013*	Room 5 - Gray Adhesive on Brown Paneling				Positive Stop (Not Analyzed)
A-007A-R15 *132305450-0014*	Room 15 - Gray Battleship Linoleum	Gray/Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-007B-R15 *132305450-0015*	Room 15 - Gray Battleship Linoleum	Gray/Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-008A-R15 *132305450-0016*	Room 15 - Brown Mastic on Gray Battleship Linoleum	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-008B-R15 *132305450-0017*	Room 15 - Brown Mastic on Gray Battleship Linoleum	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-009A-R23 *132305450-0018*	Room 23 - Ceramic Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-009B-R23 *132305450-0019*	Room 23 - Ceramic Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-010A-R23 *132305450-0020*	Room 23 - Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-010B-R23 *132305450-0021*	Room 23 - Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-011A-R34 *132305450-0022*	Room 34 - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-011B-R27 *132305450-0023*	Room 27 - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-011C-R27 *132305450-0024*	Room 27 - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-012A-R20 *132305450-0025*	Room 20 - Sprinkler Fitting Thread Sealant	Gray Non-Fibrous Homogeneous	2% Fibrous (Other)	98% Non-fibrous (Other)	None Detected
A-012B-R21 *132305450-0026*	Room 21 - Sprinkler Fitting Thread Sealant	Gray Non-Fibrous Homogeneous	2% Fibrous (Other)	98% Non-fibrous (Other)	None Detected
A-013A-R18 *132305450-0027*	Room 18 - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
A-013B-R18 *132305450-0028*	Room 18 - Black Mastic				Positive Stop (Not Analyzed)
A-014A-R13 *132305450-0029*	Room 13 - Beige Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-014B-R14 *132305450-0030*	Room 14 - Beige Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-015A-R12 *132305450-0031*	Room 12 - Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-015B-R12 *132305450-0032*	Room 12 - Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-016A-R17 *132305450-0033*	Room 17 - Yellow Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-016B-R17 *132305450-0034*	Room 17 - Yellow Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-017A-R03 *132305450-0035*	Room 03 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-017B-R03 *132305450-0036*	Room 03 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-039A-R07 *132305450-0037*	Room 07 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-039B-R07 *132305450-0038*	Room 07 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-040A-R12 *132305450-0039*	Room 12 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-040B-R12 *132305450-0040*	Room 12 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-041A-R14 *132305450-0041*	Room 14 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-041B-R14 *132305450-0042*	Room 14 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-042A-R18 *132305450-0043*	Room 18 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-042B-R18 *132305450-0044*	Room 18 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-043A-R21 *132305450-0045*	Room 21 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-043B-R21 *132305450-0046*	Room 21 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-044A-R34 *132305450-0047*	Room 34 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-044B-R34 *132305450-0048*	Room 34 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-018A-N *132305450-0049*	Exterior - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-018B-W *132305450-0050*	Exterior - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-018C-S *132305450-0051*	Exterior - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-019A-R23 *132305450-0052*	Room 23 - Concrete Slab in Basement	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-019B-R37 *132305450-0053*	Room 37 - Concrete Slab in Basement	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-019C-R28 *132305450-0054*	Room 28 - Concrete Slab in Basement	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-020A-R06 *132305450-0055*	Room 06 - Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-020B-R06 *132305450-0056*	Room 06 - Joint Compound				Positive Stop (Not Analyzed)
A-035A-R07 *132305450-0057*	Room 07 - Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-035B-R07 *132305450-0058*	Room 07 - Joint Compound				Positive Stop (Not Analyzed)
A-036A-R12 *132305450-0059*	Room 12 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-036B-R12 *132305450-0060*	Room 12 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-037A-R14 *132305450-0061*	Room 14 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-037B-R14 *132305450-0062*	Room 14 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-038A-R28 *132305450-0063*	Room 28 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-038B-R28 *132305450-0064*	Room 28 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-021A *132305450-0065*	Exterior - Flashing Caulk	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-021B *132305450-0066*	Exterior - Flashing Caulk				Positive Stop (Not Analyzed)
A-021C *132305450-0067*	Exterior - Flashing Caulk				Positive Stop (Not Analyzed)
A-022A *132305450-0068*	Exterior - Silver Paint	Black/Silver Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-022B *132305450-0069*	Exterior - Silver Paint				Positive Stop (Not Analyzed)
A-022C *132305450-0070*	Exterior - Silver Paint				Positive Stop (Not Analyzed)
A-023A *132305450-0071*	Exterior - White Caulk	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-023B *132305450-0072*	Exterior - White Caulk				Positive Stop (Not Analyzed)
A-024A *132305450-0073*	Exterior - Light Gray Caulk	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-024B *132305450-0074*	Exterior - Light Gray Caulk				Positive Stop (Not Analyzed)
A-025A *132305450-0075*	Exterior - Asphalt Shingle	Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-025B *132305450-0076*	Exterior - Asphalt Shingle	Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-026A *132305450-0077*	Exterior - Brown Roof Paper	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-026B *132305450-0078*	Exterior - Brown Roof Paper	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-045A *132305450-0079*	Exterior - Black Roof Paper	Black Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-045B *132305450-0080*	Exterior - Black Roof Paper	Black Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-027A *132305450-0081*	Exterior - Built-up Tar Paper	Black Non-Fibrous Homogeneous	25% Cellulose	65% Non-fibrous (Other)	10% Chrysotile
A-027B *132305450-0082*	Exterior - Built-up Tar Paper				Positive Stop (Not Analyzed)
A-028A *132305450-0083*	Exterior - Asphalt Layer	Black Non-Fibrous Homogeneous	10% Cellulose	84% Non-fibrous (Other)	6% Chrysotile
A-028B *132305450-0084*	Exterior - Asphalt Layer				Positive Stop (Not Analyzed)
A-029A *132305450-0085*	Exterior - Rubber Roofing Membrane	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-029B *132305450-0086*	Exterior - Rubber Roofing Membrane	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-030A *132305450-0087*	Exterior - Fiberboard	Brown/Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
A-030B *132305450-0088*	Exterior - Fiberboard	Brown/Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
A-031A *132305450-0089*	Exterior - Rubber Roofing Patch Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-031B *132305450-0090*	Exterior - Rubber Roofing Patch Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-031C *132305450-0091*	Exterior - Rubber Roofing Patch Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-032A *132305450-0092*	Gym - Ceiling Panels	Brown/Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-032B *132305450-0093*	Gym - Ceiling Panels	Brown/Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
A-033A *132305450-0094*	Exterior - Gray Caulk	Gray/Black/Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-033B *132305450-0095*	Exterior - Gray Caulk	Gray/Black/Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-034A *132305450-0096*	Exterior - Built-up Roofing	Black Fibrous Homogeneous	35% Cellulose	63% Non-fibrous (Other)	2% Chrysotile
A-034B *132305450-0097*	Exterior - Built-up Roofing				Positive Stop (Not Analyzed)

Analyst(s)
Ava Kopellas (12)
John McCarthy (71)

Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 08/29/2023 14:49:48

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0792

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0792-01 5

23K0792-14 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357360 10

Dual Column RPD Report 11

Flag/Qualifier Summary 13

Certifications 14

Chain of Custody/Sample Receipt 15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0792

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

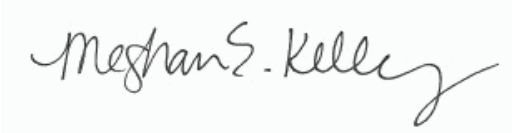
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-305-Ex-000.5	23K0792-01	Soil		SM 2540G SW-846 8082A	
P-305-Ex-0.501	23K0792-02	Soil		-	
P-305-Ex-0101.5	23K0792-03	Soil		-	
P-305-Ex-01.502	23K0792-04	Soil		-	
P-305-Ex-0202.5	23K0792-05	Soil		-	
P-305-Ex-02.503	23K0792-06	Soil		-	
P-305-Ex-0303.5	23K0792-07	Soil		-	
P-305-Ex-03.504	23K0792-08	Soil		-	
P-305-Ex-0404.5	23K0792-09	Soil		-	
P-305-Ex-04.505	23K0792-10	Soil		-	
P-305-Ex-0506	23K0792-11	Soil		-	
P-305-Ex-0607	23K0792-12	Soil		-	
P-305-Ex-0708	23K0792-13	Soil		-	
P-306-Ex-000.5	23K0792-14	Soil		SM 2540G SW-846 8082A	
P-306-Ex-0.501	23K0792-15	Soil		-	
P-306-Ex-0101.5	23K0792-16	Soil		-	
P-306-Ex-01.502	23K0792-17	Soil		-	
P-306-Ex-0202.5	23K0792-18	Soil		-	
P-306-Ex-02.503	23K0792-19	Soil		-	
P-306-Ex-0303.5	23K0792-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0792

Date Received: 11/6/2023

Field Sample #: P-305-Ex-000.5 | Sampled: 11/1/2023 09:00

Sample ID: 23K0792-01

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:07	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.0	30-150		11/10/23 12:07
Decachlorobiphenyl [2]	87.9	30-150		11/10/23 12:07
Tetrachloro-m-xylene [1]	97.1	30-150		11/10/23 12:07
Tetrachloro-m-xylene [2]	89.8	30-150		11/10/23 12:07

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0792

Date Received: 11/6/2023

Field Sample #: P-305-Ex-000.5 | Sampled: 11/1/2023 09:00

Sample ID: 23K0792-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.2		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0792

Date Received: 11/6/2023

Field Sample #: P-306-Ex-000.5 | Sampled: 11/1/2023 09:30

Sample ID: 23K0792-14

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1221 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1232 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1242 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1248 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1254 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1260 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1262 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM
Aroclor-1268 [1]	ND	0.078	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:24	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.1	30-150		11/10/23 12:24
Decachlorobiphenyl [2]	81.7	30-150		11/10/23 12:24
Tetrachloro-m-xylene [1]	94.5	30-150		11/10/23 12:24
Tetrachloro-m-xylene [2]	87.8	30-150		11/10/23 12:24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0792

Date Received: 11/6/2023

Field Sample #: P-306-Ex-000.5 | Sampled: 11/1/2023 09:30

Sample ID: 23K0792-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.6		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0792-01 [P-305-Ex-000.5]	B357371	11/07/23
23K0792-14 [P-306-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0792-01 [P-305-Ex-000.5]	B357360	10.5	10.0	11/07/23
23K0792-14 [P-306-Ex-000.5]	B357360	10.7	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1

Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0792 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-305-Ex-000.5	11/1/2023	9:00			U		1				X
2	P-305-Ex-0.501	11/1/2023	9:01			U		1				H
3	P-305-Ex-0101.5	11/1/2023	9:02			U		1				H
4	P-305-Ex-01.502	11/1/2023	9:03			U		1				H
5	P-305-Ex-0202.5	11/1/2023	9:04			U		1				H
6	P-305-Ex-02.503	11/1/2023	9:05			U		1				H
7	P-305-Ex-0303.5	11/1/2023	9:06			U		1				H
8	P-305-Ex-03.504	11/1/2023	9:07			U		1				H
9	P-305-Ex-0404.5	11/1/2023	9:08			U		1				H
10	P-305-Ex-04.505	11/1/2023	9:09			U		1				H

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1820	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
GT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0792 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-305-Ex-0506	11/1/2023	9:10			U		1				H	
12	P-305-Ex-0607	11/1/2023	9:11			U		1				H	
13	P-305-Ex-0708	11/1/2023	9:12			U		1				H	
14	P-306-Ex-000.5	11/1/2023	9:30			U		1				X	
15	P-306-Ex-0.501	11/1/2023	9:31			U		1				H	
16	P-306-Ex-0101.5	11/1/2023	9:32			U		1				H	
17	P-306-Ex-01.502	11/1/2023	9:33			U		1				H	
18	P-306-Ex-0202.5	11/1/2023	9:34			U		1				H	
19	P-306-Ex-02.503	11/1/2023	9:35			U		1				H	
20	P-306-Ex-0303.5	11/1/2023	9:36			U		3				H	

Relinquished by: (signature) — Date/Time: 11/6/23 1157
Received by: (signature) — Date/Time: 11/6/23 1157
Relinquished by: (signature) — Date/Time: 11/6/23 1630
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time STM 11/6/23 1454

Temperature Method Gun # 4

Temp ☒ < 6° C Actual Temperature 2.5

Rush Samples: Yes / (No) Notify

Short Hold: Yes (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			→																	←	-	(3)
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0793

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0793-07 5

23K0793-20 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357360 10

Dual Column RPD Report 11

Flag/Qualifier Summary 14

Certifications 15

Chain of Custody/Sample Receipt 16

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0793

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

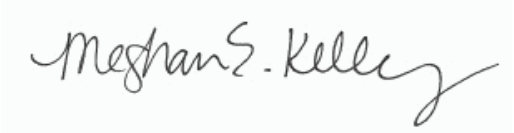
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-306-Ex-03.504	23K0793-01	Soil		-	
P-306-Ex-0404.5	23K0793-02	Soil		-	
P-306-Ex-4.505	23K0793-03	Soil		-	
P-306-Ex-0506	23K0793-04	Soil		-	
P-306-Ex-0607	23K0793-05	Soil		-	
P-306-Ex-0708	23K0793-06	Soil		-	
P-307-Ex-000.5	23K0793-07	Soil		SM 2540G	
				SW-846 8082A	
P-307-Ex-0.501	23K0793-08	Soil		-	
P-307-Ex-0101.5	23K0793-09	Soil		-	
P-307-Ex-01.502	23K0793-10	Soil		-	
P-307-Ex-0202.5	23K0793-11	Soil		-	
P-307-Ex-2.503	23K0793-12	Soil		-	
P-307-Ex-0303.5	23K0793-13	Soil		-	
P-307-Ex-03.504	23K0793-14	Soil		-	
P-307-Ex-0404.5	23K0793-15	Soil		-	
P-307-Ex-04.505	23K0793-16	Soil		-	
P-307-Ex-0506	23K0793-17	Soil		-	
P-307-Ex-0607	23K0793-18	Soil		-	
P-307-Ex-0708	23K0793-19	Soil		-	
P-308-Ex-000.5	23K0793-20	Soil		SM 2540G	
				SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0793

Date Received: 11/6/2023

Field Sample #: P-307-Ex-000.5 | Sampled: 11/1/2023 10:20

Sample ID: 23K0793-07

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.2	30-150		11/10/23 12:41
Decachlorobiphenyl [2]	87.6	30-150		11/10/23 12:41
Tetrachloro-m-xylene [1]	95.2	30-150		11/10/23 12:41
Tetrachloro-m-xylene [2]	88.3	30-150		11/10/23 12:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0793

Date Received: 11/6/2023

Field Sample #: P-307-Ex-000.5 | Sampled: 11/1/2023 10:20

Sample ID: 23K0793-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0793

Date Received: 11/6/2023

Field Sample #: P-308-Ex-000.5 | Sampled: 11/1/2023 11:00

Sample ID: 23K0793-20

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1254 [1]	0.22	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 12:58	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.6	30-150		11/10/23 12:58
Decachlorobiphenyl [2]	88.8	30-150		11/10/23 12:58
Tetrachloro-m-xylene [1]	98.6	30-150		11/10/23 12:58
Tetrachloro-m-xylene [2]	91.8	30-150		11/10/23 12:58

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0793

Date Received: 11/6/2023

Field Sample #: P-308-Ex-000.5 | Sampled: 11/1/2023 11:00

Sample ID: 23K0793-20

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.9		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0793-07 [P-307-Ex-000.5]	B357371	11/07/23
23K0793-20 [P-308-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0793-07 [P-307-Ex-000.5]	B357360	10.4	10.0	11/07/23
23K0793-20 [P-308-Ex-000.5]	B357360	10.0	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-308-Ex-000.5

Lab Sample ID: 23K0793-20 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.20	9.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0793 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-306-Ex-03.504	11/1/2023	9:37			U		1				H	
2	P-306-Ex-0404.5	11/1/2023	9:38			U		1				H	
3	P-306-Ex-04.505	11/1/2023	9:39			U		1				H	
4	P-306-Ex-0506	11/1/2023	9:40			U		3				H	
5	P-306-Ex-0607	11/1/2023	9:41			U		1				H	
6	P-306-Ex-0708	11/1/2023	9:42			U		1				H	
7	P-307-Ex-000.5	11/1/2023	10:20			U		1				X	
8	P-307-Ex-0.501	11/1/2023	10:21			U		1				H	
9	P-307-Ex-0101.5	11/1/2023	10:22			U		1				H	
10	P-307-Ex-01.502	11/1/2023	10:23			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature) 25, 28, 29	Date/Time: 11/6/23 1634
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0793 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-307-Ex-0202.5	11/1/2023	10:24			U		1				H	
12	P-307-Ex-02.503	11/1/2023	10:25			U		1				H	
13	P-307-Ex-0303.5	11/1/2023	10:26			U		1				H	
14	P-307-Ex-03.504	11/1/2023	10:27			U		1				H	
15	P-307-Ex-0404.5	11/1/2023	10:28			U		1				H	
16	P-307-Ex-04.505	11/1/2023	10:29			U		1				H	
17	P-307-Ex-0506	11/1/2023	10:30			U		1				H	
18	P-307-Ex-0607	11/1/2023	10:31			U		1				H	
19	P-307-Ex-0708	11/1/2023	10:32			U		1				H	
20	P-308-Ex-000.5	11/1/2023	11:00			U		1				X	

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time STM 11/6/23 2021

Temperature Method Gun # 4

Temp X < 6° C Actual Temperature 2.5, 2.8, 2.9

Rush Samples: Yes (No) Notify

Short Hold: Yes (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			-	-	-	3	-	-	-												-	-
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0794

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0794-13 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357360 8

Dual Column RPD Report 9

Flag/Qualifier Summary 11

Certifications 12

Chain of Custody/Sample Receipt 13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0794

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-308-Ex-0.501	23K0794-01	Soil		-	
P-308-Ex-0101.5	23K0794-02	Soil		-	
P-308-Ex-01.502	23K0794-03	Soil		-	
P-308-Ex-0202.5	23K0794-04	Soil		-	
P-308-Ex-02.503	23K0794-05	Soil		-	
P-308-Ex-0303.5	23K0794-06	Soil		-	
P-308-Ex-03.504	23K0794-07	Soil		-	
P-308-Ex-0404.5	23K0794-08	Soil		-	
P-308-Ex-04.505	23K0794-09	Soil		-	
P-308-Ex-0506	23K0794-10	Soil		-	
P-308-Ex-0607	23K0794-11	Soil		-	
P-308-Ex-0708	23K0794-12	Soil		-	
P-309-Ex-000.5	23K0794-13	Soil		SM 2540G	
				SW-846 8082A	
P-309-Ex-0.501	23K0794-14	Soil		-	
P-309-Ex-0101.5	23K0794-15	Soil		-	
P-309-Ex-01.502	23K0794-16	Soil		-	
P-309-Ex-0202.5	23K0794-17	Soil		-	
P-309-Ex-02.503	23K0794-18	Soil		-	
P-309-Ex-0303.5	23K0794-19	Soil		-	
P-309-Ex-03.504	23K0794-20	Soil		-	

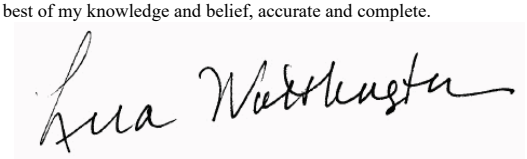
con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0794

Date Received: 11/6/2023

Field Sample #: P-309-Ex-000.5 | Sampled: 11/1/2023 11:50

Sample ID: 23K0794-13

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:15	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.6	30-150		11/10/23 13:15
Decachlorobiphenyl [2]	84.1	30-150		11/10/23 13:15
Tetrachloro-m-xylene [1]	82.7	30-150		11/10/23 13:15
Tetrachloro-m-xylene [2]	76.3	30-150		11/10/23 13:15

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0794

Date Received: 11/6/2023

Field Sample #: P-309-Ex-000.5 | Sampled: 11/1/2023 11:50

Sample ID: 23K0794-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.8		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0794-13 [P-309-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0794-13 [P-309-Ex-000.5]	B357360	10.4	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1

Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

'23K0744 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
1	P-308-Ex-0.501	11/1/2023	11:01			U		1				H										
2	P-308-Ex-0101.5	11/1/2023	11:02			U		1				H										
3	P-308-Ex-01.502	11/1/2023	11:03			U		1				H										
4	P-308-Ex-0202.5	11/1/2023	11:04			U		1				H										
5	P-308-Ex-02.503	11/1/2023	11:05			U		1				H										
6	P-308-Ex-0303.5	11/1/2023	11:06			U		1				H										
7	P-308-Ex-03.504	11/1/2023	11:07			U		1				H										
8	P-308-Ex-0404.5	11/1/2023	11:08			U		1				H										
9	P-308-Ex-04.505	11/1/2023	11:09			U		1				H										
10	P-308-Ex-0506	11/1/2023	11:10			U		1				H										

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23K0794 RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-308-Ex-0607	11/1/2023	11:11			U		1				H	
12	P-308-Ex-0708	11/1/2023	11:12			U		1				H	
13	P-309-Ex-000.5	11/1/2023	11:50			U		1				X	
14	P-309-Ex-0.501	11/1/2023	11:51			U		1				H	
15	P-309-Ex-0101.5	11/1/2023	11:52			U		1				H	
16	P-309-Ex-01.502	11/1/2023	11:53			U		1				H	
17	P-309-Ex-0202.5	11/1/2023	11:54			U		1				H	
18	P-309-Ex-02.503	11/1/2023	11:55			U		1				H	
19	P-309-Ex-0303.5	11/1/2023	11:56			U		1				H	
20	P-309-Ex-03.504	11/1/2023	11:57			U		3				H	

Relinquished by: (signature) — Date/Time: 11/6/23 1157
Received by: (signature) — Date/Time: 11/6/23 1157
Relinquished by: (signature) — Date/Time: 11/6/23 1620
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Lab Comments:

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time SJM 11/6/23 2049

Temperature Method Gun # 4

Temp ☒ < 6° C Actual Temperature 2.8, 2.9

Rush Samples: Yes (No) Notify

Short Hold: Yes (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Sample				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars																					
8oz Amb/Clear																							
4oz Amb/Clear																					3		
2oz Amb/Clear																							
Unpreserved	1 Liter	Ambers																					
HCL																							
Sulfuric																							
Sulfuric	250mL																						
Phosphoric																							
HCl																							
Unpreserved	100mL																						
Unpreserved	1 Liter	Plastics																					
Sulfuric																							
Unpreserved	500mL																						
Sulfuric																							
Unpreserved	250mL																						
Trizma																							
Sulfuric																							
Nitric																							
NaOH																							
Ammonium Acetate																							
NaOH/Zinc																							
Unpreserved	VOA Vials																						
HCl																							
MeOH																							
D.I. Water																							
BiSulfate																							
Col/Bact	Other / Fill in																						

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0795

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0795-03 5

23K0795-04 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357360 10

Dual Column RPD Report 11

Flag/Qualifier Summary 14

Certifications 15

Chain of Custody/Sample Receipt 16

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0795

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-FD026	23K0795-01	Soil		-	
P-FD027	23K0795-02	Soil		-	
P-FD028	23K0795-03	Soil		SM 2540G	
				SW-846 8082A	
P-FD029	23K0795-04	Soil		SM 2540G	
				SW-846 8082A	
P-FD030	23K0795-05	Soil		-	
P-FD031	23K0795-06	Soil		-	
P-FD032	23K0795-07	Soil		-	
P-FD033	23K0795-08	Soil		-	
P-FD034	23K0795-09	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0795

Date Received: 11/6/2023

Field Sample #: P-FD028 | Sampled: 11/2/2023 16:01

Sample ID: 23K0795-03

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:32	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.8	30-150		11/10/23 13:32
Decachlorobiphenyl [2]	91.6	30-150		11/10/23 13:32
Tetrachloro-m-xylene [1]	100	30-150		11/10/23 13:32
Tetrachloro-m-xylene [2]	93.0	30-150		11/10/23 13:32

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0795

Date Received: 11/6/2023

Field Sample #: P-FD028 | Sampled: 11/2/2023 16:01

Sample ID: 23K0795-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.6		% Wt	1		SM 2540G	11/7/23	11/7/23 13:01	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0795

Date Received: 11/6/2023

Field Sample #: P-FD029 | Sampled: 11/2/2023 16:02

Sample ID: 23K0795-04

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1254 [1]	0.34	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 13:49	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.2	30-150		11/10/23 13:49
Decachlorobiphenyl [2]	86.5	30-150		11/10/23 13:49
Tetrachloro-m-xylene [1]	96.0	30-150		11/10/23 13:49
Tetrachloro-m-xylene [2]	89.2	30-150		11/10/23 13:49

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0795

Date Received: 11/6/2023

Field Sample #: P-FD029 | Sampled: 11/2/2023 16:02

Sample ID: 23K0795-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.7		% Wt	1		SM 2540G	11/7/23	11/7/23 13:01	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0795-03 [P-FD028]	B357422	11/07/23
23K0795-04 [P-FD029]	B357422	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0795-03 [P-FD028]	B357360	10.7	10.0	11/07/23
23K0795-04 [P-FD029]	B357360	10.6	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD029

Lab Sample ID: 23K0795-04 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.34	
	2	0.000	-0.030	0.030	0.32	6.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0795 HT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-FD026	11/1/2023	8:07			U		1				H											
2	P-FD027	11/2/2023	16:00			U		1				H											
3	P-FD028	11/2/2023	16:01			U		1				X											
4	P-FD029	11/2/2023	16:02			U		1				X											
5	P-FD030	11/2/2023	16:03			U		1				H											
6	P-FD031	11/2/2023	16:04			U		1				H											
7	P-FD032	11/2/2023	16:05			U		1				H											
8	P-FD033	11/2/2023	16:06			U		1				H											
9	P-FD034	11/2/2023	16:07			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 1155
Received by: (signature)	11/6/23 1457
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 11/6/23 1630

Back-Sheet By / Date / Time: Mcm 11/6/23 2116

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 2.5

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Soils Jars (Circle Amb/Clear)	16oz Amb/Clear																				
	8oz Amb/Clear																				
	4oz Amb/Clear	—	—	—	—	—	—	—	—	←											
	2oz Amb/Clear																				
Ambers 1 Liter	Unpreserved																				
	HCL																				
	Sulfuric																				
Ambers 250mL	Sulfuric																				
	Phosphoric																				
	HCl																				
Ambers 100mL	Unpreserved																				
Plastics 1 Liter	Unpreserved																				
	Sulfuric																				
Plastics 500mL	Unpreserved																				
	Sulfuric																				
Plastics 250mL	Unpreserved																				
	Trizma																				
	Sulfuric																				
	Nitric																				
	NaOH																				
	Ammonium Acetate																				
	NaOH/Zinc																				
VOA Vials	Unpreserved																				
	HCl																				
	MeOH																				
	D.I. Water																				
	BiSulfate																				
Other / Fill in	Col/Bact																				

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0796

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0796-19 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357360 8

Dual Column RPD Report 9

Flag/Qualifier Summary 12

Certifications 13

Chain of Custody/Sample Receipt 14

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0796

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-328-Ex-06.507	23K0796-01	Soil		-	
P-328-Ex-0707.5	23K0796-02	Soil		-	
P-328-Ex-07.508	23K0796-03	Soil		-	
P-328-Ex-0808.5	23K0796-04	Soil		-	
P-328-Ex-08.509	23K0796-05	Soil		-	
P-328-Ex-0909.5	23K0796-06	Soil		-	
P-328-Ex-09.510	23K0796-07	Soil		-	
P-328-Ex-1010.5	23K0796-08	Soil		-	
P-328-Ex-10.511	23K0796-09	Soil		-	
P-328-Ex-1112	23K0796-10	Soil		-	
P-329-Ex	23K0796-11	Product/Solid		-	
P-330-Ex	23K0796-12	Product/Solid		-	
P-331-Ex	23K0796-13	Product/Solid		-	
P-FD019	23K0796-14	Soil		-	
P-FD020	23K0796-15	Soil		-	
P-FD021	23K0796-16	Soil		-	
P-FD022	23K0796-17	Soil		-	
P-FD023	23K0796-18	Soil		-	
P-FD024	23K0796-19	Soil		SM 2540G	
				SW-846 8082A	
P-FD025	23K0796-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0796

Date Received: 11/6/2023

Field Sample #: P-FD024 | Sampled: 11/1/2023 08:05

Sample ID: 23K0796-19

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1254 [1]	0.66	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.2	30-150		11/10/23 14:05
Decachlorobiphenyl [2]	89.8	30-150		11/10/23 14:05
Tetrachloro-m-xylene [1]	95.0	30-150		11/10/23 14:05
Tetrachloro-m-xylene [2]	88.6	30-150		11/10/23 14:05

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0796

Date Received: 11/6/2023

Field Sample #: P-FD024 | Sampled: 11/1/2023 08:05

Sample ID: 23K0796-19

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.7		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0796-19 [P-FD024]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0796-19 [P-FD024]	B357360	10.4	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-FD024

Lab Sample ID: 23K0796-19 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.66	
	2	0.000	-0.030	0.030	0.63	4.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0796 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
1	P-328-Ex-06.507	11/2/2023	10:58			U		1				H	
2	P-328-Ex-0707.5	11/2/2023	10:59			U		1				H	
3	P-328-Ex-07.508	11/2/2023	11:00			U		1				H	
4	P-328-Ex-0808.5	11/2/2023	11:01			U		1				H	
5	P-328-Ex-08.509	11/2/2023	11:02			U		1				H	
6	P-328-Ex-0909.5	11/2/2023	11:03			U		1				H	
7	P-328-Ex-09.510	11/2/2023	11:04			U		1				H	
8	P-328-Ex-1010.5	11/2/2023	11:05			U		1				H	
9	P-328-Ex-10.511	11/2/2023	11:06			U		1				H	
10	P-328-Ex-1112	11/2/2023	11:07			U		3				H	

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-329-Ex	11/2/2023	11:09			U		1				H	
12	P-330-Ex	11/2/2023	11::10			U		1				H	
13	P-331-Ex	11/2/2023	11:11			U		1				H	
14	P-FD019	11/1/2023	8:00			U		1				H	
15	P-FD020	11/1/2023	8:01			U		1				H	
16	P-FD021	11/1/2023	8:02			U		1				H	
17	P-FD022	11/1/2023	8:03			U		1				H	
18	P-FD023	11/1/2023	8:04			U		1				H	
19	P-FD024	11/1/2023	8:05			U		1				X	
20	P-FD025	11/1/2023	8:06			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time: 11/6/23 1157
Received by: (signature) Date/Time: 11/6/23 1157
Relinquished by: (signature) Date/Time: 11/6/23 1630
Received by: (signature) 25 Date/Time: 11/6/23 1630
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Nobis

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time Mcm 11/6/23 1630

Back-Sheet By / Date / Time Mcm 11/6/23 2135

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 2.5

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear (Soils Jars)																				
8oz Amb/Clear (Soils Jars)																				
4oz Amb/Clear (Soils Jars)	1									3	1									
2oz Amb/Clear (Soils Jars)																				
Unpreserved (Ambers 1 Liter)																				
HCL (Ambers 1 Liter)																				
Sulfuric (Ambers 1 Liter)																				
Sulfuric (Ambers 250mL)																				
Phosphoric (Ambers 250mL)																				
HCl (Ambers 250mL)																				
Unpreserved (Ambers 100mL)																				
Unpreserved (Plastics 1 Liter)																				
Sulfuric (Plastics 1 Liter)																				
Unpreserved (Plastics 500mL)																				
Sulfuric (Plastics 500mL)																				
Unpreserved (Plastics 250mL)																				
Trizma (Plastics 250mL)																				
Sulfuric (Plastics 250mL)																				
Nitric (Plastics 250mL)																				
NaOH (Plastics 250mL)																				
Ammonium Acetate (Plastics 250mL)																				
NaOH/Zinc (Plastics 250mL)																				
Unpreserved (VOA Vials)																				
HCl (VOA Vials)																				
MeOH (VOA Vials)																				
D.I. Water (VOA Vials)																				
BiSulfate (VOA Vials)																				
Col/Bact (Other / Fill in)																				
(Other / Fill in)																				
(Other / Fill in)																				
(Other / Fill in)																				
(Other / Fill in)																				

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0797

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0797-01 5

23K0797-14 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357360 10

Dual Column RPD Report 12

Flag/Qualifier Summary 20

Certifications 21

Chain of Custody/Sample Receipt 22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0797

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-325-Ex-000.5	23K0797-01	Soil		SM 2540G	
				SW-846 8082A	
P-325-Ex-0.501	23K0797-02	Soil		-	
P-325-Ex-0101.5	23K0797-03	Soil		-	
P-325-Ex-01.502	23K0797-04	Soil		-	
P-325-Ex-0202.5	23K0797-05	Soil		-	
P-325-Ex-02.503	23K0797-06	Soil		-	
P-325-Ex-0303.5	23K0797-07	Soil		-	
P-325-Ex-03.504	23K0797-08	Soil		-	
P-325-Ex-0404.5	23K0797-09	Soil		-	
P-325-Ex-04.505	23K0797-10	Soil		-	
P-325-Ex-0506	23K0797-11	Soil		-	
P-325-Ex-0607	23K0797-12	Soil		-	
P-325-Ex-0708	23K0797-13	Soil		-	
P-326-Ex-000.5	23K0797-14	Soil		SM 2540G	
				SW-846 8082A	
P-326-Ex-0.501	23K0797-15	Soil		-	
P-326-Ex-0101.5	23K0797-16	Soil		-	
P-326-Ex-01.502	23K0797-17	Soil		-	
P-326-Ex-0202.5	23K0797-18	Soil		-	
P-326-Ex-02.503	23K0797-19	Soil		-	
P-326-Ex-0303.5	23K0797-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0797

Date Received: 11/6/2023

Field Sample #: P-325-Ex-000.5 | Sampled: 11/2/2023 10:10

Sample ID: 23K0797-01

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1254 [1]	0.096	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:22	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.5	30-150		11/10/23 14:22
Decachlorobiphenyl [2]	84.8	30-150		11/10/23 14:22
Tetrachloro-m-xylene [1]	89.3	30-150		11/10/23 14:22
Tetrachloro-m-xylene [2]	83.2	30-150		11/10/23 14:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0797

Date Received: 11/6/2023

Field Sample #: P-325-Ex-000.5 | Sampled: 11/2/2023 10:10

Sample ID: 23K0797-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0797

Date Received: 11/6/2023

Field Sample #: P-326-Ex-000.5 | Sampled: 11/2/2023 10:30

Sample ID: 23K0797-14

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1254 [1]	0.17	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:39	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.8	30-150		11/10/23 14:39
Decachlorobiphenyl [2]	93.9	30-150		11/10/23 14:39
Tetrachloro-m-xylene [1]	97.7	30-150		11/10/23 14:39
Tetrachloro-m-xylene [2]	90.4	30-150		11/10/23 14:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0797

Date Received: 11/6/2023

Field Sample #: P-326-Ex-000.5 | Sampled: 11/2/2023 10:30

Sample ID: 23K0797-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.2		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0797-01 [P-325-Ex-000.5]	B357371	11/07/23
23K0797-14 [P-326-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0797-01 [P-325-Ex-000.5]	B357360	10.2	10.0	11/07/23
23K0797-14 [P-326-Ex-000.5]	B357360	10.3	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Matrix Spike (B357360-MS1)	**Source: 23K0797-01**			Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.17	0.084	mg/Kg dry	0.211	ND	82.7	40-140			
Aroclor-1016 [2C]	0.19	0.084	mg/Kg dry	0.211	ND	88.4	40-140			
Aroclor-1260	0.18	0.084	mg/Kg dry	0.211	ND	87.4	40-140			
Aroclor-1260 [2C]	0.19	0.084	mg/Kg dry	0.211	ND	87.9	40-140			
Surrogate: Decachlorobiphenyl	*0.182*		mg/Kg dry	0.211		86.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg dry	0.211		88.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.193*		mg/Kg dry	0.211		91.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg dry	0.211		85.8	30-150			
Matrix Spike (B357360-MS2)	**Source: 23K0797-14**			Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.18	0.087	mg/Kg dry	0.217	ND	83.3	40-140			
Aroclor-1016 [2C]	0.19	0.087	mg/Kg dry	0.217	ND	87.4	40-140			
Aroclor-1260	0.20	0.087	mg/Kg dry	0.217	ND	94.3	40-140			
Aroclor-1260 [2C]	0.21	0.087	mg/Kg dry	0.217	ND	96.5	40-140			
Surrogate: Decachlorobiphenyl	*0.188*		mg/Kg dry	0.217		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.202*		mg/Kg dry	0.217		93.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.210*		mg/Kg dry	0.217		96.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.194*		mg/Kg dry	0.217		89.4	30-150			
Matrix Spike Dup (B357360-MSD1)	**Source: 23K0797-01**			Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.20	0.083	mg/Kg dry	0.209	ND	96.1	40-140	14.1	50	
Aroclor-1016 [2C]	0.21	0.083	mg/Kg dry	0.209	ND	101	40-140	12.5	50	
Aroclor-1260	0.21	0.083	mg/Kg dry	0.209	ND	101	40-140	13.2	50	
Aroclor-1260 [2C]	0.21	0.083	mg/Kg dry	0.209	ND	103	40-140	14.5	50	
Surrogate: Decachlorobiphenyl	*0.195*		mg/Kg dry	0.209		93.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.200*		mg/Kg dry	0.209		95.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.209*		mg/Kg dry	0.209		100	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.196*		mg/Kg dry	0.209		93.9	30-150			
Matrix Spike Dup (B357360-MSD2)	**Source: 23K0797-14**			Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.19	0.086	mg/Kg dry	0.215	ND	86.3	40-140	2.59	50	
Aroclor-1016 [2C]	0.19	0.086	mg/Kg dry	0.215	ND	89.7	40-140	1.54	50	
Aroclor-1260	0.21	0.086	mg/Kg dry	0.215	ND	97.2	40-140	2.02	50	
Aroclor-1260 [2C]	0.21	0.086	mg/Kg dry	0.215	ND	97.9	40-140	0.367	50	
Surrogate: Decachlorobiphenyl	*0.191*		mg/Kg dry	0.215		88.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.200*		mg/Kg dry	0.215		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.217*		mg/Kg dry	0.215		101	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.196*		mg/Kg dry	0.215		91.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-325-Ex-000.5

Lab Sample ID: 23K0797-01 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.096	
	2	0.000	-0.030	0.030	0.090	6.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-326-Ex-000.5

Lab Sample ID: 23K0797-14 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.16	6.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B357360-MS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.19	11.1
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.19	5.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B357360-MS2 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.19	5.4
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.21	4.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B357360-MSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.21	4.9
Aroclor-1260	1	0.000	-0.030	0.030	0.21	
	2	0.000	-0.030	0.030	0.21	0.0

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B357360-MSD2 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.19	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.21	
	2	0.000	-0.030	0.030	0.21	0.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0147 KT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-325-Ex-000.5	11/2/2023	10:10			U		3				X	
2	P-325-Ex-0.501	11/2/2023	10:11			U		1				H	
3	P-325-Ex-0101.5	11/2/2023	10:12			U		1				H	
4	P-325-Ex-01.502	11/2/2023	10:13			U		1				H	
5	P-325-Ex-0202.5	11/2/2023	10:14			U		1				H	
6	P-325-Ex-02.503	11/2/2023	10:15			U		1				H	
7	P-325-Ex-0303.5	11/2/2023	10:16			U		1				H	
8	P-325-Ex-03.504	11/2/2023	10:17			U		1				H	
9	P-325-Ex-0404.5	11/2/2023	10:18			U		1				H	
10	P-325-Ex-04.505	11/2/2023	10:19			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)	29	Date/Time: 11/6/23 1630
Relinquished by: (signature)	28.4	Date/Time:
Received by: (signature)	25.	Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-325-Ex-0506	11/2/2023	10:20			U		1				H	
12	P-325-Ex-0607	11/2/2023	10:21			U		1				H	
13	P-325-Ex-0708	11/2/2023	10:22			U		1				H	
14	P-326-Ex-000.5	11/2/2023	10:30			U		3				X	
15	P-326-Ex-0.501	11/2/2023	10:31			U		1				H	
16	P-326-Ex-0101.5	11/2/2023	10:32			U		1				H	
17	P-326-Ex-01.502	11/2/2023	10:33			U		1				H	
18	P-326-Ex-0202.5	11/2/2023	10:34			U		1				H	
19	P-326-Ex-02.503	11/2/2023	10:35			U		1				H	
20	P-326-Ex-0303.5	11/2/2023	10:36			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 11/6/23 1630

Back-Sheet By / Date / Time: Mcm 11/6/23 2141

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 25, 28, 29, 46

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0798

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0798-06 5

23K0798-19 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357360 10

Dual Column RPD Report 11

Flag/Qualifier Summary 13

Certifications 14

Chain of Custody/Sample Receipt 15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0798

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-309-Ex-0404.5	23K0798-01	Soil		-	
P-309-Ex-04.505	23K0798-02	Soil		-	
P-309-Ex-0506	23K0798-03	Soil		-	
P-309-Ex-0607	23K0798-04	Soil		-	
P-309-Ex-0708	23K0798-05	Soil		-	
P-310-Ex-000.5	23K0798-06	Soil		SM 2540G	
				SW-846 8082A	
P-310-Ex-0.501	23K0798-07	Soil		-	
P-310-Ex-0101.5	23K0798-08	Soil		-	
P-310-Ex-01.502	23K0798-09	Soil		-	
P-310-Ex-0202.5	23K0798-10	Soil		-	
P-310-Ex-02.503	23K0798-11	Soil		-	
P-310-Ex-0303.5	23K0798-12	Soil		-	
P-310-Ex-03.504	23K0798-13	Soil		-	
P-310-Ex-0404.5	23K0798-14	Soil		-	
P-310-Ex-4.505	23K0798-15	Soil		-	
P-310-Ex-0506	23K0798-16	Soil		-	
P-310-Ex-0607	23K0798-17	Soil		-	
P-310-Ex-0708	23K0798-18	Soil		-	
P-311-Ex-000.5	23K0798-19	Soil		SM 2540G	
				SW-846 8082A	
P-311-Ex-0.501	23K0798-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0798

Date Received: 11/6/2023

Field Sample #: P-310-Ex-000.5 | Sampled: 11/1/2023 12:40

Sample ID: 23K0798-06

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 14:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.2	30-150		11/10/23 14:56
Decachlorobiphenyl [2]	87.8	30-150		11/10/23 14:56
Tetrachloro-m-xylene [1]	94.4	30-150		11/10/23 14:56
Tetrachloro-m-xylene [2]	88.9	30-150		11/10/23 14:56

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0798

Date Received: 11/6/2023

Field Sample #: P-310-Ex-000.5 | Sampled: 11/1/2023 12:40

Sample ID: 23K0798-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.6		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0798

Date Received: 11/6/2023

Field Sample #: P-311-Ex-000.5 | Sampled: 11/1/2023 13:20

Sample ID: 23K0798-19

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 15:17	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.3	30-150		11/10/23 15:17
Decachlorobiphenyl [2]	86.0	30-150		11/10/23 15:17
Tetrachloro-m-xylene [1]	91.0	30-150		11/10/23 15:17
Tetrachloro-m-xylene [2]	84.6	30-150		11/10/23 15:17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0798

Date Received: 11/6/2023

Field Sample #: P-311-Ex-000.5 | Sampled: 11/1/2023 13:20

Sample ID: 23K0798-19

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.7		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0798-06 [P-310-Ex-000.5]	B357371	11/07/23
23K0798-19 [P-311-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0798-06 [P-310-Ex-000.5]	B357360	10.1	10.0	11/07/23
23K0798-19 [P-311-Ex-000.5]	B357360	10.3	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357360 - SW-846 3540C										
Blank (B357360-BLK1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.200		91.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.3	30-150			
LCS (B357360-BS1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.1	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140			
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
LCS Dup (B357360-BSD1)				Prepared: 11/07/23 Analyzed: 11/09/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.541	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1	40-140	0.347	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.5	40-140	0.556	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140	0.996	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg wet	0.200		91.6	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357360-BS1

Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357360-BSD1 Date(s) Analyzed: 11/09/2023 11/09/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0798 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
1	P-309-Ex-0404.5	11/1/2023	11:58			U		1				H	
2	P-309-Ex-04.505	11/1/2023	11:59			U		1				H	
3	P-309-Ex-0506	11/1/2023	12:00			U		1				H	
4	P-309-Ex-0607	11/1/2023	12:01			U		1				H	
5	P-309-Ex-0708	11/1/2023	12:02			U		1				H	
6	P-310-Ex-000.5	11/1/2023	12:40			U		1				X	
7	P-310-Ex-0.501	11/1/2023	12:41			U		1				H	
8	P-310-Ex-0101.5	11/1/2023	12:42			U		1				H	
9	P-310-Ex-01.502	11/1/2023	12:43			U		1				H	
10	P-310-Ex-0202.5	11/1/2023	12:44			U		1				H	

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature) 28, 29	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344

23K0798 RF

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-310-Ex-02.503	11/1/2023	12:45			U		1				H	
12	P-310-Ex-0303.5	11/1/2023	12:46			U		1				H	
13	P-310-Ex-03.504	11/1/2023	12:47			U		1				H	
14	P-310-Ex-0404.5	11/1/2023	12:48			U		1				H	
15	P-310-Ex-04.505	11/1/2023	12:49			U		1				H	
16	P-310-Ex-0506	11/1/2023	12:50			U		3				H	
17	P-310-Ex-0607	11/1/2023	12:51			U		1				H	
18	P-310-Ex-0708	11/1/2023	12:52			U		1				H	
19	P-311-Ex-000.5	11/1/2023	13:20			U		1				X	
20	P-311-Ex-0.501	11/1/2023	13:21			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) / N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 15	
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/8 1630	28
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time STM 11/6/23 2146

Temperature Method Gun # 4

Temp ☒ < 6° C Actual Temperature 2.8, 2.9

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars																				
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	1 Liter	Ambers																				
HCL																						
Sulfuric																						
Sulfuric	250mL																					
Phosphoric																						
HCl																						
Unpreserved	100mL																					
Unpreserved	1 Liter	Plastics																				
Sulfuric																						
Unpreserved	500mL																					
Sulfuric																						
Unpreserved	250mL																					
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved		VOA Vials																				
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact		Other / Fill in																				

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0799

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0799-07 5

23K0799-20 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357389 10

Dual Column RPD Report 11

Flag/Qualifier Summary 13

Certifications 14

Chain of Custody/Sample Receipt 15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0799

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-326-Ex-03.504	23K0799-01	Soil		-	
P-326-Ex-0404.5	23K0799-02	Soil		-	
P-326-Ex-04.505	23K0799-03	Soil		-	
P-326-Ex-0506	23K0799-04	Soil		-	
P-326-Ex-0607	23K0799-05	Soil		-	
P-326-Ex-0708	23K0799-06	Soil		-	
P-327-Ex-000.5	23K0799-07	Soil		SM 2540G	
				SW-846 8082A	
P-327-Ex-0501	23K0799-08	Soil		-	
P-327-Ex-0101.5	23K0799-09	Soil		-	
P-327-Ex-01.502	23K0799-10	Soil		-	
P-327-Ex-0202.5	23K0799-11	Soil		-	
P-327-Ex-02.503	23K0799-12	Soil		-	
P-327-Ex-0303.5	23K0799-13	Soil		-	
P-327-Ex-03.504	23K0799-14	Soil		-	
P-327-Ex-0404.5	23K0799-15	Soil		-	
P-327-Ex-04.505	23K0799-16	Soil		-	
P-327-Ex-0506	23K0799-17	Soil		-	
P-327-Ex-0607	23K0799-18	Soil		-	
P-327-Ex-0708	23K0799-19	Soil		-	
P-328-Ex-0606.5	23K0799-20	Soil		SM 2540G	
				SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0799

Date Received: 11/6/2023

Field Sample #: P-327-Ex-000.5 | Sampled: 11/2/2023 10:45

Sample ID: 23K0799-07

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:35	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.2	30-150		11/10/23 19:35
Decachlorobiphenyl [2]	92.3	30-150		11/10/23 19:35
Tetrachloro-m-xylene [1]	96.7	30-150		11/10/23 19:35
Tetrachloro-m-xylene [2]	92.0	30-150		11/10/23 19:35

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0799

Date Received: 11/6/2023

Field Sample #: P-327-Ex-000.5 | Sampled: 11/2/2023 10:45

Sample ID: 23K0799-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	98.5		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0799

Date Received: 11/6/2023

Field Sample #: P-328-Ex-0606.5 | Sampled: 11/2/2023 10:58

Sample ID: 23K0799-20

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 19:52	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.7	30-150		11/10/23 19:52
Decachlorobiphenyl [2]	95.9	30-150		11/10/23 19:52
Tetrachloro-m-xylene [1]	96.7	30-150		11/10/23 19:52
Tetrachloro-m-xylene [2]	92.6	30-150		11/10/23 19:52

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0799

Date Received: 11/6/2023

Field Sample #: P-328-Ex-0606.5 | Sampled: 11/2/2023 10:58

Sample ID: 23K0799-20

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.2		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0799-07 [P-327-Ex-000.5]	B357371	11/07/23
23K0799-20 [P-328-Ex-0606.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0799-07 [P-327-Ex-000.5]	B357389	10.0	10.0	11/07/23
23K0799-20 [P-328-Ex-0606.5]	B357389	10.0	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1

Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

L23K0F44 KT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction												[2] Preservation Code
1	P-326-Ex-03.504	11/2/2023	10:37			U		1				H												
2	P-326-Ex-0404.5	11/2/2023	10:38			U		1				H												
3	P-326-Ex-04.505	11/2/2023	10:39			U		1				H												
4	P-326-Ex-0506	11/2/2023	10:40			U		1				H												
5	P-326-Ex-0607	11/2/2023	10:41			U		1				H												
6	P-326-Ex-0708	11/2/2023	10:42			U		1				H												
7	P-327-Ex-000.5	11/2/2023	10:45			U		1				X												
8	P-327-Ex-0.501	11/2/2023	10:46			U		1				H												
9	P-327-Ex-0101.5	11/2/2023	10:47			U		1				H												
10	P-327-Ex-01.502	11/2/2023	10:48			U		1				H												

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1152
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-327-Ex-0202.5	11/2/2023	10:49			U		1				H	
12	P-327-Ex-02.503	11/2/2023	10:50			U		1				H	
13	P-327-Ex-0303.5	11/2/2023	10:51			U		1				H	
14	P-327-Ex-03.504	11/2/2023	10:52			U		1				H	
15	P-327-Ex-0404.5	11/2/2023	10:53			U		1				H	
16	P-327-Ex-04.505	11/2/2023	10:54			U		1				H	
17	P-327-Ex-0506	11/2/2023	10:55			U		1				H	
18	P-327-Ex-0607	11/2/2023	10:56			U		1				H	
19	P-327-Ex-0708	11/2/2023	10:57			U		1				H	
20	P-328-Ex-0606.5	11/2/2023	10:58			U		1				X	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 11/6/23 1630

Back-Sheet By / Date / Time: Mcm 11/6/23 2150

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 2.9, 4.0

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample			
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)		
8oz Amb/Clear			
4oz Amb/Clear			
2oz Amb/Clear			
Unpreserved	1 Liter	Ambers	
HCL			
Sulfuric			
Sulfuric	250mL		
Phosphoric			
HCl			
Unpreserved	100mL		
Unpreserved	1 Liter	Plastics	
Sulfuric			
Unpreserved	500mL		
Sulfuric			
Unpreserved	250mL		
Trizma			
Sulfuric			
Nitric			
NaOH			
Ammonium Acetate			
NaOH/Zinc			
Unpreserved	VOA Vials		
HCl			
MeOH			
D.I. Water			
BiSulfate			
Col/Bact	Other / Fill in		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0800

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0800-12 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357389 8

Dual Column RPD Report 9

Flag/Qualifier Summary 11

Certifications 12

Chain of Custody/Sample Receipt 13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0800

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-311-Ex-0101.5	23K0800-01	Soil		-	
P-311-Ex-01.502	23K0800-02	Soil		-	
P-311-Ex-0202.5	23K0800-03	Soil		-	
P-311-Ex-02.503	23K0800-04	Soil		-	
P-311-Ex-0303.5	23K0800-05	Soil		-	
P-311-Ex-03.504	23K0800-06	Soil		-	
P-311-Ex-0404.5	23K0800-07	Soil		-	
P-311-Ex-4.505	23K0800-08	Soil		-	
P-311-Ex-0506	23K0800-09	Soil		-	
P-311-Ex-0607	23K0800-10	Soil		-	
P-311-Ex-0708	23K0800-11	Soil		-	
P-312-Ex-000.5	23K0800-12	Soil		SM 2540G	
				SW-846 8082A	
P-312-Ex-0.501	23K0800-13	Soil		-	
P-312-Ex-0101.5	23K0800-14	Soil		-	
P-312-Ex-01.502	23K0800-15	Soil		-	
P-312-Ex-0202.5	23K0800-16	Soil		-	
P-312-Ex-2.503	23K0800-17	Soil		-	
P-312-Ex-0303.5	23K0800-18	Soil		-	
P-312-Ex-3.504	23K0800-19	Soil		-	
P-312-Ex-0404.5	23K0800-20	Soil		-	

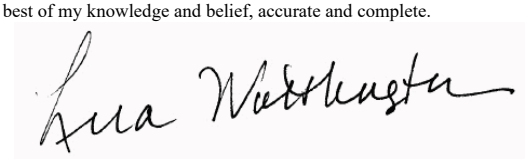
con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0800

Date Received: 11/6/2023

Field Sample #: P-312-Ex-000.5 | Sampled: 11/1/2023 13:40

Sample ID: 23K0800-12

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:09	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.0	30-150		11/10/23 20:09
Decachlorobiphenyl [2]	93.2	30-150		11/10/23 20:09
Tetrachloro-m-xylene [1]	100	30-150		11/10/23 20:09
Tetrachloro-m-xylene [2]	95.4	30-150		11/10/23 20:09

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0800

Date Received: 11/6/2023

Field Sample #: P-312-Ex-000.5 | Sampled: 11/1/2023 13:40

Sample ID: 23K0800-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.5		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0800-12 [P-312-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0800-12 [P-312-Ex-000.5]	B357389	10.4	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1

Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0800 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-311-Ex-0101.5	11/1/2023	13:22			U		1				H
2	P-311-Ex-01.502	11/1/2023	13:23			U		1				H
3	P-311-Ex-0202.5	11/1/2023	13:24			U		1				H
4	P-311-Ex-02.503	11/1/2023	13:25			U		1				H
5	P-311-Ex-0303.5	11/1/2023	13:26			U		1				H
6	P-311-Ex-03.504	11/1/2023	13:27			U		1				H
7	P-311-Ex-0404.5	11/1/2023	13:28			U		1				H
8	P-311-Ex-04.505	11/1/2023	13:29			U		1				H
9	P-311-Ex-0506	11/1/2023	13:30			U		3				H
10	P-311-Ex-0607	11/1/2023	13:31			U		1				H

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature) 28, 29	Date/Time: 11/6/23 1830
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA:
CT:
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0800 RF

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction												[2] Preservation Code
11	P-311-Ex-0708	11/1/2023	13:32			U		1				H												
12	P-312-Ex-000.5	11/1/2023	13:40			U		1				X												
13	P-312-Ex-0.501	11/1/2023	13:41			U		1				H												
14	P-312-Ex-0101.5	11/1/2023	13:42			U		1				H												
15	P-312-Ex-01.502	11/1/2023	13:43			U		1				H												
16	P-312-Ex-0202.5	11/1/2023	13:44			U		1				H												
17	P-312-Ex-02.503	11/1/2023	13:45			U		1				H												
18	P-312-Ex-0303.5	11/1/2023	13:46			U		1				H												
19	P-312-Ex-03.504	11/1/2023	13:47			U		1				H												
20	P-312-Ex-0404.5	11/1/2023	13:48			U		1				H												

Relinquished by: (signature) Date/Time: 11/6/23 1157
Received by: (signature) Date/Time: 11/6/23 1157
Relinquished by: (signature) Date/Time: 11/6/23 1630
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

*Pace Analytical is not responsible for missing samples from prepacked coolers

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time JTM 11/6/23 2206

Temperature Method Gun # 4

Temp ☒ < 6° C Actual Temperature 2-8, 2-9

Rush Samples: Yes / (No) Notify

Short Hold: Yes (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars	(Circle Amb/Clear)																				
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

Qualtrax ID: 120836

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0801

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0801-08 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357389 8

Dual Column RPD Report 9

Flag/Qualifier Summary 11

Certifications 12

Chain of Custody/Sample Receipt 13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0801

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-323-Ex-0303.5	23K0801-01	Soil		-	
P-323-Ex-03.504	23K0801-02	Soil		-	
P-323-Ex-0404.5	23K0801-03	Soil		-	
P-323-Ex-04.505	23K0801-04	Soil		-	
P-323-Ex-0506	23K0801-05	Soil		-	
P-323-Ex-0607	23K0801-06	Soil		-	
P-323-Ex-0708	23K0801-07	Soil		-	
P-324-Ex-000.5	23K0801-08	Soil		SM 2540G	
				SW-846 8082A	
P-324-Ex-0.501	23K0801-09	Soil		-	
P-324-Ex-0101.5	23K0801-10	Soil		-	
P-324-Ex-01.502	23K0801-11	Soil		-	
P-324-Ex-0202.5	23K0801-12	Soil		-	
P-324-Ex-02.503	23K0801-13	Soil		-	
P-324-Ex-0303.5	23K0801-14	Soil		-	
P-324-Ex-03.504	23K0801-15	Soil		-	
P-324-Ex-0404.5	23K0801-16	Soil		-	
P-324-Ex-04.505	23K0801-17	Soil		-	
P-324-Ex-0506	23K0801-18	Soil		-	
P-324-Ex-0607	23K0801-19	Soil		-	
P-324-Ex-0708	23K0801-20	Soil		-	

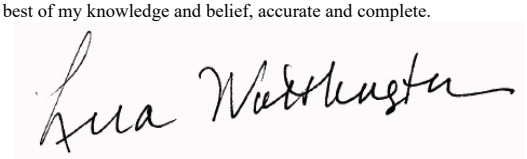
con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0801

Date Received: 11/6/2023

Field Sample #: P-324-Ex-000.5 | Sampled: 11/2/2023 09:50

Sample ID: 23K0801-08

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:26	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.5	30-150		11/10/23 20:26
Decachlorobiphenyl [2]	91.1	30-150		11/10/23 20:26
Tetrachloro-m-xylene [1]	99.0	30-150		11/10/23 20:26
Tetrachloro-m-xylene [2]	94.2	30-150		11/10/23 20:26

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0801

Date Received: 11/6/2023

Field Sample #: P-324-Ex-000.5 | Sampled: 11/2/2023 09:50

Sample ID: 23K0801-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.1		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0801-08 [P-324-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0801-08 [P-324-Ex-000.5]	B357389	10.4	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1

Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0801 KF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction												[2] Preservation Code
1	P-323-Ex-0303.5	11/2/2023	9:36			U		1				H												
2	P-323-Ex-03.504	11/2/2023	9:37			U		1				H												
3	P-323-Ex-0404.5	11/2/2023	9:38			U		1				H												
4	P-323-Ex-04.505	11/2/2023	9:39			U		1				H												
5	P-323-Ex-0506	11/2/2023	9:40			U		1				H												
6	P-323-Ex-0607	11/2/2023	9:41			U		3				H												
7	P-323-Ex-0708	11/2/2023	9:42			U		1				H												
8	P-324-Ex-000.5	11/2/2023	9:50			U		1				X												
9	P-324-Ex-0.501	11/2/2023	9:52			U		1				H												
10	P-324-Ex-0101.5	11/2/2023	9:53			U		1				H												

Container Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-324-Ex-01.502	11/2/2023	9:53			U		1				H	
12	P-324-Ex-0202.5	11/2/2023	9:54			U		1				H	
13	P-324-Ex-02.503	11/2/2023	9:55			U		1				H	
14	P-324-Ex-0303.5	11/2/2023	9:56			U		1				H	
15	P-324-Ex-03.504	11/2/2023	9:57			U		1				H	
16	P-324-Ex-0404.5	11/2/2023	9:58			U		1				H	
17	P-324-Ex-04.505	11/2/2023	9:59			U		1				H	
18	P-324-Ex-0506	11/2/2023	10:00			U		1				H	
19	P-324-Ex-0607	11/2/2023	10:01			U		1				H	
20	P-324-Ex-0708	11/2/2023	10:02			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y N
Glassware in freezer? Y N
Prepackaged Cooler? Y N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time: 11/6/23 1157
Received by: (signature) Date/Time: 11/6/23 1157
Relinquished by: (signature) Date/Time: 11/6/23 1630
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
☐ MCP Certification Form Required
☐ CT RCP Required
☐ RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Lab Comments:

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 11/6/23 1630

Back-Sheet By / Date / Time: Mcm 11/6/23 2210

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 25.29, 4.0

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			1				1	3	1													1
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0802

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0802-05 5

23K0802-18 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357389 10

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) 12

B357371 12

Dual Column RPD Report 13

Flag/Qualifier Summary 18

Certifications 19

Chain of Custody/Sample Receipt 20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0802

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-312-Ex-04.505	23K0802-01	Soil		-	
P-312-Ex-0506	23K0802-02	Soil		-	
P-312-Ex-0607	23K0802-03	Soil		-	
P-312-Ex-0708	23K0802-04	Soil		-	
P-313-Ex-000.5	23K0802-05	Soil		SM 2540G	
				SW-846 8082A	
P-313-Ex-0.501	23K0802-06	Soil		-	
P-313-Ex-0101.5	23K0802-07	Soil		-	
P-313-Ex-01.502	23K0802-08	Soil		-	
P-313-Ex-0202.5	23K0802-09	Soil		-	
P-313-Ex-2.503	23K0802-10	Soil		-	
P-313-Ex-0303.5	23K0802-11	Soil		-	
P-313-Ex-3.504	23K0802-12	Soil		-	
P-313-Ex-0404.5	23K0802-13	Soil		-	
P-313-Ex-4.505	23K0802-14	Soil		-	
P-313-Ex-0506	23K0802-15	Soil		-	
P-313-Ex-0607	23K0802-16	Soil		-	
P-313-Ex-0708	23K0802-17	Soil		-	
P-314-Ex-000.5	23K0802-18	Soil		SM 2540G	
				SW-846 8082A	
P-314-Ex-0.501	23K0802-19	Soil		-	
P-314-Ex-0101.5	23K0802-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0802

Date Received: 11/6/2023

Field Sample #: P-313-Ex-000.5 | Sampled: 11/1/2023 13:55

Sample ID: 23K0802-05

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1254 [1]	0.13	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 20:43	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.0	30-150		11/10/23 20:43
Decachlorobiphenyl [2]	95.2	30-150		11/10/23 20:43
Tetrachloro-m-xylene [1]	99.3	30-150		11/10/23 20:43
Tetrachloro-m-xylene [2]	94.6	30-150		11/10/23 20:43

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0802

Date Received: 11/6/2023

Field Sample #: P-313-Ex-000.5 | Sampled: 11/1/2023 13:55

Sample ID: 23K0802-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0802

Date Received: 11/6/2023

Field Sample #: P-314-Ex-000.5 | Sampled: 11/1/2023 14:10

Sample ID: 23K0802-18

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1221 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1232 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1242 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1248 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1254 [1]	0.29	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1260 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1262 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM
Aroclor-1268 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.7	30-150		11/10/23 22:41
Decachlorobiphenyl [2]	98.3	30-150		11/10/23 22:41
Tetrachloro-m-xylene [1]	101	30-150		11/10/23 22:41
Tetrachloro-m-xylene [2]	95.0	30-150		11/10/23 22:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0802

Date Received: 11/6/2023

Field Sample #: P-314-Ex-000.5 | Sampled: 11/1/2023 14:10

Sample ID: 23K0802-18

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.9		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0802-05 [P-313-Ex-000.5]	B357371	11/07/23
23K0802-18 [P-314-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0802-05 [P-313-Ex-000.5]	B357389	10.4	10.0	11/07/23
23K0802-18 [P-314-Ex-000.5]	B357389	10.1	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Matrix Spike (B357389-MS1)		**Source: 23K0802-05**		Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.22	0.091	mg/Kg dry	0.229	ND	94.4	40-140			
Aroclor-1016 [2C]	0.24	0.091	mg/Kg dry	0.229	ND	105	40-140			
Aroclor-1260	0.35	0.091	mg/Kg dry	0.229	0.088	115	40-140			
Aroclor-1260 [2C]	0.37	0.091	mg/Kg dry	0.229	0.081	127	40-140			
Surrogate: Decachlorobiphenyl	*0.208*		mg/Kg dry	0.229		91.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.219*		mg/Kg dry	0.229		96.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.225*		mg/Kg dry	0.229		98.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.213*		mg/Kg dry	0.229		93.0	30-150			
Matrix Spike Dup (B357389-MSD1)		**Source: 23K0802-05**		Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.22	0.091	mg/Kg dry	0.229	ND	98.4	40-140	4.17	50	
Aroclor-1016 [2C]	0.25	0.091	mg/Kg dry	0.229	ND	109	40-140	3.56	50	
Aroclor-1260	0.36	0.091	mg/Kg dry	0.229	0.088	119	40-140	2.40	50	
Aroclor-1260 [2C]	0.38	0.091	mg/Kg dry	0.229	0.081	130	40-140	1.84	50	
Surrogate: Decachlorobiphenyl	*0.218*		mg/Kg dry	0.229		95.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.229*		mg/Kg dry	0.229		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.238*		mg/Kg dry	0.229		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.226*		mg/Kg dry	0.229		99.0	30-150			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357371 - % Solids										
Duplicate (B357371-DUP1)	**Source: 23K0802-18**		Prepared & Analyzed: 11/07/23							
% Solids	85.4		% Wt		84.9			0.580	10	

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-314-Ex-000.5

Lab Sample ID: 23K0802-18 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.29	
	2	0.000	-0.030	0.030	0.21	32.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B357389-MS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.24	8.7
Aroclor-1260	1	0.000	-0.030	0.030	0.35	
	2	0.000	-0.030	0.030	0.37	5.6

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B357389-MSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.25	8.3
Aroclor-1260	1	0.000	-0.030	0.030	0.36	
	2	0.000	-0.030	0.030	0.38	5.4

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0802 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-312-Ex-04.505	11/1/2023	13:49			U		1				H	
2	P-312-Ex-0506	11/1/2023	13:50			U		1				H	
3	P-312-Ex-0607	11/1/2023	13:51			U		1				H	
4	P-312-Ex-0708	11/1/2023	13:52			U		1				H	
5	P-313-Ex-000.5	11/1/2023	13:55			U		3				X	
6	P-313-Ex-0.501	11/1/2023	13:56			U		1				H	
7	P-313-Ex-0101.5	11/1/2023	13:57			U		1				H	
8	P-313-Ex-01.502	11/1/2023	13:58			U		1				H	
9	P-313-Ex-0202.5	11/1/2023	13:59			U		1				H	
10	P-313-Ex-02.503	11/1/2023	14:00			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 15
Received by: (signature)	11/6/23 1152
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	11/6/23 630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Others

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0802 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-313-Ex-0303.5	11/1/2023	14:01			U		1				H	
12	P-313-Ex-03.504	11/1/2023	14:02			U		1				H	
13	P-313-Ex-0404.5	11/1/2023	14:03			U		1				H	
14	P-313-Ex-04.505	11/1/2023	14:04			U		1				H	
15	P-313-Ex-0506	11/1/2023	14:05			U		1				H	
16	P-313-Ex-0607	11/1/2023	14:06			U		1				H	
17	P-313-Ex-0708	11/1/2023	14:07			U		1				H	
18	P-314-Ex-000.5	11/1/2023	14:10			U		1				X	
19	P-314-Ex-0.501	11/1/2023	14:11			U		1				H	
20	P-314-Ex-0101.5	11/1/2023	14:12			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1600
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time STM 11/6/23 2225

Temperature Method Gun # 4

Temp ☒ < 6° C Actual Temperature 2.8, 2.9

Rush Samples: Yes (No) Notify ____

Short Hold: Yes (No) Notify ____

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample			
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)		
8oz Amb/Clear			
4oz Amb/Clear			
2oz Amb/Clear			
Unpreserved	Ambers	1 Liter	
HCL			
Sulfuric			
Sulfuric		250mL	
Phosphoric			
HCl			
Unpreserved		100mL	
Unpreserved	Plastics	1 Liter	
Sulfuric			
Unpreserved		500mL	
Sulfuric			
Unpreserved		250mL	
Trizma			
Sulfuric			
Nitric			
NaOH			
Ammonium Acetate			
NaOH/Zinc			
Unpreserved	VOA Vials		
HCl			
MeOH			
D.I. Water			
BiSulfate			
Col/Bact	Other / Fill in		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0803

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0803-02 5

23K0803-15 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357389 10

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) 11

B357371 11

Dual Column RPD Report 12

Flag/Qualifier Summary 15

Certifications 16

Chain of Custody/Sample Receipt 17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0803

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-321-Ex-0708	23K0803-01	Soil		-	
P-322-Ex-000.5	23K0803-02	Soil		SM 2540G	
				SW-846 8082A	
P-322-Ex-0501	23K0803-03	Soil		-	
P-322-Ex-0101.5	23K0803-04	Soil		-	
P-322-Ex-01.502	23K0803-05	Soil		-	
P-322-Ex-0202.5	23K0803-06	Soil		-	
P-322-Ex-02.503	23K0803-07	Soil		-	
P-322-Ex-0303.5	23K0803-08	Soil		-	
P-322-Ex-03.504	23K0803-09	Soil		-	
P-322-Ex-0404.5	23K0803-10	Soil		-	
P-322-Ex-04.505	23K0803-11	Soil		-	
P-322-Ex-0506	23K0803-12	Soil		-	
P-322-Ex-0607	23K0803-13	Soil		-	
P-322-Ex-0708	23K0803-14	Soil		-	
P-323-Ex-000.5	23K0803-15	Soil		SM 2540G	
				SW-846 8082A	
P-323-Ex-0501	23K0803-16	Soil		-	
P-323-Ex-0101.5	23K0803-17	Soil		-	
P-323-Ex-01.502	23K0803-18	Soil		-	
P-323-Ex-0202.5	23K0803-19	Soil		-	
P-323-Ex-02.503	23K0803-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0803

Date Received: 11/6/2023

Field Sample #: P-322-Ex-000.5 | Sampled: 11/2/2023 09:10

Sample ID: 23K0803-02

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 22:58	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.3	30-150		11/10/23 22:58
Decachlorobiphenyl [2]	97.4	30-150		11/10/23 22:58
Tetrachloro-m-xylene [1]	98.3	30-150		11/10/23 22:58
Tetrachloro-m-xylene [2]	92.9	30-150		11/10/23 22:58

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0803

Date Received: 11/6/2023

Field Sample #: P-322-Ex-000.5 | Sampled: 11/2/2023 09:10

Sample ID: 23K0803-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.2		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0803

Date Received: 11/6/2023

Field Sample #: P-323-Ex-000.5 | Sampled: 11/2/2023 09:30

Sample ID: 23K0803-15

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1254 [2]	0.52	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:14	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.3	30-150		11/10/23 23:14
Decachlorobiphenyl [2]	94.5	30-150		11/10/23 23:14
Tetrachloro-m-xylene [1]	103	30-150		11/10/23 23:14
Tetrachloro-m-xylene [2]	97.8	30-150		11/10/23 23:14

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0803

Date Received: 11/6/2023

Field Sample #: P-323-Ex-000.5 | Sampled: 11/2/2023 09:30

Sample ID: 23K0803-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/7/23	11/7/23 13:01	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0803-02 [P-322-Ex-000.5]	B357371	11/07/23

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0803-15 [P-323-Ex-000.5]	B357422	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0803-02 [P-322-Ex-000.5]	B357389	10.2	10.0	11/07/23
23K0803-15 [P-323-Ex-000.5]	B357389	10.0	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357371 - % Solids										
Duplicate (B357371-DUP2)	**Source: 23K0803-02**		Prepared & Analyzed: 11/07/23							
% Solids	87.7		% Wt		92.2			5.05	10	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-323-Ex-000.5

Lab Sample ID: 23K0803-15 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.51	
	2	0.000	-0.030	0.030	0.52	1.9

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

L3K0808 KT

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time			
7-Day	☐	10-Day	☑
PFAS 10-Day (std)	☐	Due Date:	

Rush-Approval Required			
1-Day	☐	3-Day	☐
2-Day	☐	4-Day	☐

Data Delivery			
Format:	PDF ☑	EXCEL ☑	
Other:	Equis EDD		
CLP Like Data Pkg Required:	☐		
Email To:	tandrews@nobis-group.com		
Fax To #:			

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

PCB ONLY

SOXHLET ☑

NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-321-Ex-0708	11/2/2023	9:02			U		1				H											
2	P-322-Ex-000.5	11/2/2023	9:10			U		1				X											
3	P-322-Ex-0.501	11/2/2023	9:11			U		1				H											
4	P-322-Ex-0101.5	11/2/2023	9:12			U		1				H											
5	P-322-Ex-01.502	11/2/2023	9:13			U		1				H											
6	P-322-Ex-0202.5	11/2/2023	9:14			U		1				H											
7	P-322-Ex-02.503	11/2/2023	9:15			U		1				H											
8	P-322-Ex-0303.5	11/2/2023	9:16			U		1				H											
9	P-322-Ex-03.504	11/2/2023	9:17			U		1				H											
10	P-322-Ex-0404.5	11/2/2023	9:18			U		1				H											

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/8 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements	
MA	
CT	
Other:	

Special Requirements	
☐	MA MCP Required
	MCP Certification Form Required
☐	CT RCP Required
	RCP Certification Form Required
☐	MA State DW Required
PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
11	P-322-Ex-04.505	11/2/2023	9:19			U		3				H											
12	P-322-Ex-0506	11/2/2023	9:20			U		1				H											
13	P-322-Ex-0607	11/2/2023	9:21			U		1				H											
14	P-322-Ex-0708	11/2/2023	9:22			U		1				H											
15	P-323-Ex-000.5	11/2/2023	9:30			U		1				X											
16	P-323-Ex-0.501	11/2/2023	9:31			U		1				H											
17	P-323-Ex-0101.5	11/2/2023	9:32			U		1				H											
18	P-323-Ex-01.502	11/2/2023	9:33			U		1				H											
19	P-323-Ex-0202.5	11/2/2023	9:34			U		1				H											
20	P-323-Ex-02.503	11/2/2023	9:35			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y N
Glassware in freezer? Y N
Prepackaged Cooler? Y N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 1157
Received by: (signature)	11/6/23 1157
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 11/6/23 1630

Back-Sheet By / Date / Time: Mcm 11/6/23 2246

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 4.0, 2.9

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			1										3	1								
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

Qualtrax ID: 120836

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0804

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0804-11 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357389 8

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) 9

B357371 9

Dual Column RPD Report 10

Flag/Qualifier Summary 13

Certifications 14

Chain of Custody/Sample Receipt 15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0804

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-314-Ex-01.502	23K0804-01	Soil		-	
P-314-Ex-0202.5	23K0804-02	Soil		-	
P-314-Ex-2.503	23K0804-03	Soil		-	
P-314-Ex-0303.5	23K0804-04	Soil		-	
P-314-Ex-3.504	23K0804-05	Soil		-	
P-314-Ex-0404.5	23K0804-06	Soil		-	
P-314-Ex-04.505	23K0804-07	Soil		-	
P-314-Ex-0506	23K0804-08	Soil		-	
P-314-Ex-0607	23K0804-09	Soil		-	
P-314-Ex-0708	23K0804-10	Soil		-	
P-315-Ex-000.5	23K0804-11	Soil		SM 2540G	
				SW-846 8082A	
P-315-Ex-0.501	23K0804-12	Soil		-	
P-315-Ex-0101.5	23K0804-13	Soil		-	
P-315-Ex-1.502	23K0804-14	Soil		-	
P-315-Ex-0202.5	23K0804-15	Soil		-	
P-315-Ex-2.503	23K0804-16	Soil		-	
P-315-Ex-0303.5	23K0804-17	Soil		-	
P-315-Ex-3.504	23K0804-18	Soil		-	
P-315-Ex-0404.5	23K0804-19	Soil		-	
P-315-Ex-4.505	23K0804-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0804

Date Received: 11/6/2023

Field Sample #: P-315-Ex-000.5 | Sampled: 11/1/2023 14:25

Sample ID: 23K0804-11

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1221 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1232 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1242 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1248 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1254 [1]	1.3	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1260 [2]	3.1	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1262 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM
Aroclor-1268 [1]	ND	0.45	mg/Kg dry	20		SW-846 8082A	11/7/23	11/11/23 8:17	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.7	30-150		11/11/23 8:17
Decachlorobiphenyl [2]	94.9	30-150		11/11/23 8:17
Tetrachloro-m-xylene [1]	107	30-150		11/11/23 8:17
Tetrachloro-m-xylene [2]	102	30-150		11/11/23 8:17

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0804

Date Received: 11/6/2023

Field Sample #: P-315-Ex-000.5 | Sampled: 11/1/2023 14:25

Sample ID: 23K0804-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.2		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0804-11 [P-315-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0804-11 [P-315-Ex-000.5]	B357389	10.5	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357371 - % Solids										
Duplicate (B357371-DUP3)	**Source: 23K0804-11**		Prepared & Analyzed: 11/07/23							
% Solids	83.5		% Wt		84.2			0.848	10	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-315-Ex-000.5

Lab Sample ID: 23K0804-11

Date(s) Analyzed: 11/11/2023 11/11/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	1.3	
	2	0.000	-0.030	0.030	1.0	26.1
Aroclor-1260	1	0.000	-0.030	0.030	2.9	
	2	0.000	-0.030	0.030	3.1	6.7

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0804 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										[2] Preservation Code
1	P-314-Ex-01.502	11/1/2023	14:13			U		1				H										
2	P-314-Ex-0202.5	11/1/2023	14:14			U		1				H										
3	P-314-Ex-02.503	11/1/2023	14:15			U		1				H										
4	P-314-Ex-0303.5	11/1/2023	14:16			U		1				H										
5	P-314-Ex-03.504	11/1/2023	14:17			U		1				H										
6	P-314-Ex-0404.5	11/1/2023	14:18			U		1				H										
7	P-314-Ex-04.505	11/1/2023	14:19			U		1				H										
8	P-314-Ex-0506	11/1/2023	14:20			U		1				H										
9	P-314-Ex-0607	11/1/2023	14:21			U		1				H										
10	P-314-Ex-0708	11/1/2023	14:22			U		1				H										

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23K0804 RF

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-315-Ex-000.5	11/1/2023	14:25			U		1				X
12	P-315-Ex-0.501	11/1/2023	14:26			U		1				H
13	P-315-Ex-0101.5	11/1/2023	14:27			U		1				H
14	P-315-Ex-01.502	11/1/2023	14:28			U		1				H
15	P-315-Ex-0202.5	11/1/2023	14:29			U		1				H
16	P-315-Ex-02.503	11/1/2023	14:30			U		1				H
17	P-315-Ex-0303.5	11/1/2023	14:31			U		1				H
18	P-315-Ex-03.504	11/1/2023	14:32			U		1				H
19	P-315-Ex-0404.5	11/1/2023	14:33			U		1				H
20	P-315-Ex-04.505	11/1/2023	14:34			U		3				H

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Lab Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time SJM 11/6/23 2256

Temperature Method Gun # 4

Temp ☒ < 6° C Actual Temperature 2.5, 2.9

Rush Samples: Yes (No) Notify

Short Hold: Yes (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Sample			
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars	
8oz Amb/Clear			
4oz Amb/Clear			
2oz Amb/Clear			
Unpreserved	1 Liter	Ambers	
HCL			
Sulfuric			
Sulfuric	250mL		
Phosphoric			
HCl			
Unpreserved	100mL		
Unpreserved	1 Liter	Plastics	
Sulfuric			
Unpreserved	500mL		
Sulfuric			
Unpreserved	250mL		
Trizma			
Sulfuric			
Nitric			
NaOH			
Ammonium Acetate			
NaOH/Zinc			
Unpreserved		VOA Vials	
HCl			
MeOH			
D.I. Water			
BiSulfate			
Col/Bact		Other / Fill in	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0805

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0805-09 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357389 8

Dual Column RPD Report 9

Flag/Qualifier Summary 12

Certifications 13

Chain of Custody/Sample Receipt 14

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0805

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-320-Ex-02.503	23K0805-01	Soil		-	
P-320-Ex-0303.5	23K0805-02	Soil		-	
P-320-Ex-03.504	23K0805-03	Soil		-	
P-320-Ex-0404.5	23K0805-04	Soil		-	
P-320-Ex-04.505	23K0805-05	Soil		-	
P-320-Ex-0506	23K0805-06	Soil		-	
P-320-Ex-0607	23K0805-07	Soil		-	
P-320-Ex-0708	23K0805-08	Soil		-	
P-321-Ex-000.5	23K0805-09	Soil		SM 2540G	
				SW-846 8082A	
P-321-Ex-0.501	23K0805-10	Soil		-	
P-321-Ex-0101.5	23K0805-11	Soil		-	
P-321-Ex-01.502	23K0805-12	Soil		-	
P-321-Ex-02.02.5	23K0805-13	Soil		-	
P-321-Ex-02.503	23K0805-14	Soil		-	
P-321-Ex-0303.5	23K0805-15	Soil		-	
P-321-Ex-03.504	23K0805-16	Soil		-	
P-321-Ex-0404.5	23K0805-17	Soil		-	
P-321-Ex-04.505	23K0805-18	Soil		-	
P-321-Ex-0506	23K0805-19	Soil		-	
P-321-Ex-0607	23K0805-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0805

Date Received: 11/6/2023

Field Sample #: P-321-Ex-000.5 | Sampled: 11/2/2023 08:50

Sample ID: 23K0805-09

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1221 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1232 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1242 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1248 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1254 [2]	0.36	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1260 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1262 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM
Aroclor-1268 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	11/7/23	11/10/23 23:48	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.7	30-150		11/10/23 23:48
Decachlorobiphenyl [2]	93.6	30-150		11/10/23 23:48
Tetrachloro-m-xylene [1]	101	30-150		11/10/23 23:48
Tetrachloro-m-xylene [2]	96.3	30-150		11/10/23 23:48

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0805

Date Received: 11/6/2023

Field Sample #: P-321-Ex-000.5 | Sampled: 11/2/2023 08:50

Sample ID: 23K0805-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/7/23	11/7/23 13:01	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0805-09 [P-321-Ex-000.5]	B357422	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0805-09 [P-321-Ex-000.5]	B357389	10.6	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-321-Ex-000.5

Lab Sample ID: 23K0805-09 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.34	
	2	0.000	-0.030	0.030	0.36	5.7

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-320-Ex-02.503	11/2/2023	8:35			U		1				H											
2	P-320-Ex-0303.5	11/2/2023	8:36			U		1				H											
3	P-320-Ex-03.504	11/2/2023	8:37			U		1				H											
4	P-320-Ex-0404.5	11/2/2023	8:38			U		1				H											
5	P-320-Ex-04.505	11/2/2023	8:39			U		1				H											
6	P-320-Ex-0506	11/2/2023	8:40			U		1				H											
7	P-320-Ex-0607	11/2/2023	8:41			U		1				H											
8	P-320-Ex-0708	11/2/2023	8:42			U		1				H											
9	P-321-Ex-000.5	11/2/2023	8:50			U		1				X											
10	P-321-Ex-0.501	11/2/2023	8:51			U		1				H											

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 115	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1230	
Received by: (signature) 40.29	Date/Time: 11/6/23 1630	
Relinquished by: (signature) 25	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-321-Ex-0101.5	11/2/2023	8:52			U		1				H	
12	P-321-Ex-01.502	11/2/2023	8:53			U		1				H	
13	P-321-Ex-0202.5	11/2/2023	8:54			U		1				H	
14	P-321-Ex-02.503	11/2/2023	8:55			U		1				H	
15	P-321-Ex-0303.5	11/2/2023	8:56			U		1				H	
16	P-321-Ex-03.504	11/2/2023	8:57			U		1				H	
17	P-321-Ex-0404.5	11/2/2023	8:58			U		1				H	
18	P-321-Ex-04.505	11/2/2023	8:59			U		1				H	
19	P-321-Ex-0506	11/2/2023	9:00			U		1				H	
20	P-321-Ex-0607	11/2/2023	9:01			U		3				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157	
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: MCM 11/6/23 1630

Back-Sheet By / Date / Time: MCM 11/6/23 2301

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 2.5, 2.9, 4.0

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Sample			
1	16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars
	8oz Amb/Clear		
1	4oz Amb/Clear		
	2oz Amb/Clear		
	Unpreserved	1 Liter	Ambers
	HCL		
	Sulfuric		
	Sulfuric	250mL	
	Phosphoric		
	HCl		
	Unpreserved	100mL	
	Unpreserved	1 Liter	Plastics
	Sulfuric		
	Unpreserved	500mL	
	Sulfuric		
	Unpreserved	250mL	
	Trizma		
	Sulfuric		
	Nitric		
	NaOH		
	Ammonium Acetate		
	NaOH/Zinc		
	Unpreserved		VOA Vials
	HCl		
	MeOH		
	D.I. Water		
	BiSulfate		
	Col/Bact		Other / Fill in

3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0806

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0806-10 5

Sample Preparation Information 7

QC Data 8

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 8

B357389 8

Dual Column RPD Report 9

Flag/Qualifier Summary 11

Certifications 12

Chain of Custody/Sample Receipt 13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0806

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-317-Ex-0202.5	23K0806-01	Soil		-	
P-317-Ex-02.503	23K0806-02	Soil		-	
P-317-Ex-0303.5	23K0806-03	Soil		-	
P-317-Ex-03.504	23K0806-04	Soil		-	
P-317-Ex-0404.5	23K0806-05	Soil		-	
P-317-Ex-04.505	23K0806-06	Soil		-	
P-317-Ex-0506	23K0806-07	Soil		-	
P-317-Ex-0607	23K0806-08	Soil		-	
P-317-Ex-0708	23K0806-09	Soil		-	
P-318-Ex-000.5	23K0806-10	Soil		SM 2540G	
				SW-846 8082A	
P-318-Ex-0.501	23K0806-11	Soil		-	
P-318-Ex-0101.5	23K0806-12	Soil		-	
P-318-Ex-01.502	23K0806-13	Soil		-	
P-318-Ex-0203.5	23K0806-14	Soil		-	
P-318-Ex-02.503	23K0806-15	Soil		-	
P-318-Ex-0303.5	23K0806-16	Soil		-	
P-318-Ex-03.504	23K0806-17	Soil		-	
P-318-Ex-0404.5	23K0806-18	Soil		-	
P-318-Ex-04.505	23K0806-19	Soil		-	
P-318-Ex-0506	23K0806-20	Soil		-	

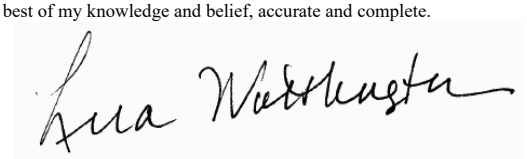
con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0806

Date Received: 11/6/2023

Field Sample #: P-318-Ex-000.5 | Sampled: 11/2/2023 08:00

Sample ID: 23K0806-10

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.8	30-150		11/11/23 0:05
Decachlorobiphenyl [2]	91.1	30-150		11/11/23 0:05
Tetrachloro-m-xylene [1]	99.1	30-150		11/11/23 0:05
Tetrachloro-m-xylene [2]	93.8	30-150		11/11/23 0:05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0806

Date Received: 11/6/2023

Field Sample #: P-318-Ex-000.5 | Sampled: 11/2/2023 08:00

Sample ID: 23K0806-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.3		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0806-10 [P-318-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0806-10 [P-318-Ex-000.5]	B357389	10.1	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1

Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0806 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-317-Ex-0202.5	11/1/2023	14:59			U		1				H	
2	P-317-Ex-02.503	11/1/2023	15:00			U		1				H	
3	P-317-Ex-0303.5	11/1/2023	15:01			U		1				H	
4	P-317-Ex-03.504	11/1/2023	15:02			U		1				H	
5	P-317-Ex-0404.5	11/1/2023	15:03			U		1				H	
6	P-317-Ex-04.505	11/1/2023	15:04			U		1				H	
7	P-317-Ex-0506	11/1/2023	15:05			U		1				H	
8	P-317-Ex-0607	11/1/2023	15:06			U		1				H	
9	P-317-Ex-0708	11/1/2023	15:07			U		1				H	
10	P-318-Ex-000.5	11/2/2023	8:00			U		1				X	

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 15	
Received by: (signature)	Date/Time: 11/6/23 1512	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-318-Ex-0.501	11/2/2023	8:01			U		1				H	
12	P-318-Ex-0101.5	11/2/2023	8:02			U		1				H	
13	P-318-Ex-01.502	11/2/2023	8:03			U		1				H	
14	P-318-Ex-0202.5	11/2/2023	8:04			U		1				H	
15	P-318-Ex-02.503	11/2/2023	8:05			U		1				H	
16	P-318-Ex-0303.5	11/2/2023	8:06			U		1				H	
17	P-318-Ex-03.504	11/2/2023	8:07			U		1				H	
18	P-318-Ex-0404.5	11/2/2023	8:08			U		1				H	
19	P-318-Ex-04.505	11/2/2023	8:09			U		1				H	
20	P-318-Ex-0506	11/2/2023	8:10			U		3				H	

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client: Nobis

Project: St. Johnsbury Armory

MCP/RCP Required: no

Deliverable Package Requirement: none

Location: St. Johnsbury, VT

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: Mcm 11/6/23 1630

Back-Sheet By / Date / Time: Mcm 11/6/23 2313

Temperature Method: Gun # 5

Temp < 6° C Actual Temperature: 2.9, 4.0

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Soils Jars (Circle Amb/Clear)	16oz Amb/Clear																				
	8oz Amb/Clear																				
	4oz Amb/Clear	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
	2oz Amb/Clear																				
Ambers	Unpreserved 1 Liter																				
	HCL 1 Liter																				
	Sulfuric 1 Liter																				
	Sulfuric 250mL																				
	Phosphoric 250mL																				
	HCl 250mL																				
	Unpreserved 100mL																				
Plastics	Unpreserved 1 Liter																				
	Sulfuric 1 Liter																				
	Unpreserved 500mL																				
	Sulfuric 500mL																				
	Unpreserved 250mL																				
	Trizma 250mL																				
	Sulfuric 250mL																				
	Nitric 250mL																				
	NaOH 250mL																				
	Ammonium Acetate 250mL																				
	NaOH/Zinc 250mL																				
VOA Vials	Unpreserved																				
	HCl																				
	MeOH																				
	D.I. Water																				
	BiSulfate																				
Other / Fill in	Col/Bact																				

Qualtrax ID: 120836

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0807

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0807-04 5

23K0807-17 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357389 10

Dual Column RPD Report 11

Flag/Qualifier Summary 14

Certifications 15

Chain of Custody/Sample Receipt 16

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0807

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-315-Ex-0506	23K0807-01	Soil		-	
P-315-Ex-0607	23K0807-02	Soil		-	
P-315-Ex-0708	23K0807-03	Soil		-	
P-316-Ex-000.5	23K0807-04	Soil		SM 2540G	
				SW-846 8082A	
P-316-Ex-0.501	23K0807-05	Soil		-	
P-316-Ex-0101.5	23K0807-06	Soil		-	
P-316-Ex-1.502	23K0807-07	Soil		-	
P-316-Ex-0202.5	23K0807-08	Soil		-	
P-316-Ex-2.503	23K0807-09	Soil		-	
P-316-Ex-0303.5	23K0807-10	Soil		-	
P-316-Ex-3.504	23K0807-11	Soil		-	
P-316-Ex-0404.5	23K0807-12	Soil		-	
P-316-Ex-4.505	23K0807-13	Soil		-	
P-316-Ex-0506	23K0807-14	Soil		-	
P-316-Ex-0607	23K0807-15	Soil		-	
P-316-Ex-0708	23K0807-16	Soil		-	
P-317-Ex-000.5	23K0807-17	Soil		SM 2540G	
				SW-846 8082A	
P-317-Ex-0.501	23K0807-18	Soil		-	
P-317-Ex-0101.5	23K0807-19	Soil		-	
P-317-Ex-01.502	23K0807-20	Soil		-	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0807

Date Received: 11/6/2023

Field Sample #: P-316-Ex-000.5 | Sampled: 11/1/2023 14:40

Sample ID: 23K0807-04

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1254 [1]	0.32	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:22	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.4	30-150		11/11/23 0:22
Decachlorobiphenyl [2]	101	30-150		11/11/23 0:22
Tetrachloro-m-xylene [1]	104	30-150		11/11/23 0:22
Tetrachloro-m-xylene [2]	98.8	30-150		11/11/23 0:22

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0807

Date Received: 11/6/2023

Field Sample #: P-316-Ex-000.5 | Sampled: 11/1/2023 14:40

Sample ID: 23K0807-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.4		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0807

Date Received: 11/6/2023

Field Sample #: P-317-Ex-000.5 | Sampled: 11/1/2023 14:55

Sample ID: 23K0807-17

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:39	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.7	30-150		11/11/23 0:39
Decachlorobiphenyl [2]	114	30-150		11/11/23 0:39
Tetrachloro-m-xylene [1]	102	30-150		11/11/23 0:39
Tetrachloro-m-xylene [2]	94.7	30-150		11/11/23 0:39

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0807

Date Received: 11/6/2023

Field Sample #: P-317-Ex-000.5 | Sampled: 11/1/2023 14:55

Sample ID: 23K0807-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0807-04 [P-316-Ex-000.5]	B357371	11/07/23
23K0807-17 [P-317-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0807-04 [P-316-Ex-000.5]	B357389	10.4	10.0	11/07/23
23K0807-17 [P-317-Ex-000.5]	B357389	10.1	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-316-Ex-000.5

Lab Sample ID: 23K0807-04 Date(s) Analyzed: 11/11/2023 11/11/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.32	
	2	0.000	-0.030	0.030	0.28	13.3

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

23K0807 KF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-315-Ex-0506	11/1/2023	14:35			U		1				H
2	P-315-Ex-0607	11/1/2023	14:36			U		1				H
3	P-315-Ex-0708	11/1/2023	14:37			U		1				H
4	P-316-Ex-000.5	11/1/2023	14:40			U		1				X
5	P-316-Ex-0.501	11/1/2023	14:41			U		1				H
6	P-316-Ex-0101.5	11/1/2023	14:42			U		1				H
7	P-316-Ex-01.502	11/1/2023	14:43			U		1				H
8	P-316-Ex-0202.5	11/1/2023	14:44			U		1				H
9	P-316-Ex-02.503	11/1/2023	14:45			U		1				H
10	P-316-Ex-0303.5	11/1/2023	14:46			U		1				H

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) / N

Glassware in freezer? Y (N)

Prepackaged Cooler? (Y) / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1650
Received by: (signature)	25 29 40	Date/Time: 11/6/23 1630
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23K0807-RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6444

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	*Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction													[2] Preservation Code
11	P-316-Ex-03.504	11/1/2023	14:47			U		1				H													
12	P-316-Ex-0404.5	11/1/2023	14:48			U		1				H													
13	P-316-Ex-04.505	11/1/2023	14:49			U		1				H													
14	P-316-Ex-0506	11/1/2023	14:50			U		1				H													
15	P-316-Ex-0607	11/1/2023	14:51			U		1				H													
16	P-316-Ex-0708	11/1/2023	14:52			U		3				H													
17	P-317-Ex-000.5	11/1/2023	14:55			U		1				X													
18	P-317-Ex-0.501	11/1/2023	14:56			U		1				H													
19	P-317-Ex-0101.5	11/1/2023	14:57			U		1				H													
20	P-317-Ex-01.502	11/1/2023	14:58			U		1				H													

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Lab Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
! = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisGroup

Project St Johnsbury Armory

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location St. Johnsbury, VT

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 11/6/23 1630

Back-Sheet By / Date / Time STM 11/6/23 2338

Temperature Method Gun # 4

Temp X < 6° C Actual Temperature 2.5, 2.9, 4.0

Rush Samples: Yes (No) Notify ____

Short Hold: Yes (No) Notify ____

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear																				
8oz Amb/Clear																				
4oz Amb/Clear	—	—	—	—	—	—	—	—	—	—	—	—	←	—	ESTh	3	—	—	←	
2oz Amb/Clear																				
Unpreserved																				
HCL																				
Sulfuric																				
Sulfuric																				
Phosphoric																				
HCl																				
Unpreserved																				
Unpreserved																				
Sulfuric																				
Unpreserved																				
Sulfuric																				
Unpreserved																				
Trizma																				
Sulfuric																				
Nitric																				
NaOH																				
Ammonium Acetate																				
NaOH/Zinc																				
Unpreserved																				
HCl																				
MeOH																				
D.I. Water																				
BiSulfate																				
Col/Bact																				

Soils Jars (Circle Amb/Clear)	Ambers		Plastics		VOA Vials	Other / Fill in
16oz Amb/Clear	Unpreserved	1 Liter	Unpreserved	1 Liter	Unpreserved	Col/Bact
8oz Amb/Clear	HCL		Sulfuric		HCl	
4oz Amb/Clear	Sulfuric		Unpreserved	500mL	MeOH	
2oz Amb/Clear	Sulfuric	250mL	Sulfuric		D.I. Water	
	Phosphoric		Unpreserved	250mL	BiSulfate	
	HCl		Trizma			
	Unpreserved	100mL	Sulfuric			
			Nitric			
			NaOH			
			Ammonium Acetate			
			NaOH/Zinc			

Qualtrax ID: 120836

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 13, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K0808

Enclosed are results of analyses for samples as received by the laboratory on November 6, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K0808-03 5

23K0808-16 7

Sample Preparation Information 9

QC Data 10

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 10

B357389 10

Dual Column RPD Report 11

Flag/Qualifier Summary 13

Certifications 14

Chain of Custody/Sample Receipt 15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 11/13/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K0808

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-318-Ex-0607	23K0808-01	Soil		-	
P-318-Ex-0708	23K0808-02	Soil		-	
P-319-Ex-000.5	23K0808-03	Soil		SM 2540G	
				SW-846 8082A	
P-319-Ex-0.501	23K0808-04	Soil		-	
P-319-Ex-0101.5	23K0808-05	Soil		-	
P-319-Ex-01.502	23K0808-06	Soil		-	
P-319-Ex-0202.5	23K0808-07	Soil		-	
P-319-Ex-02.503	23K0808-08	Soil		-	
P-319-Ex-0303.5	23K0808-09	Soil		-	
P-319-Ex-03.504	23K0808-10	Soil		-	
P-319-Ex-0404.5	23K0808-11	Soil		-	
P-319-Ex-04.505	23K0808-12	Soil		-	
P-319-Ex-0506	23K0808-13	Soil		-	
P-319-Ex-0607	23K0808-14	Soil		-	
P-319-Ex-0708	23K0808-15	Soil		-	
P-320-Ex-000.5	23K0808-16	Soil		SM 2540G	
				SW-846 8082A	
P-320-Ex-0.501	23K0808-17	Soil		-	
P-320-Ex-0101.5	23K0808-18	Soil		-	
P-320-Ex-01.502	23K0808-19	Soil		-	
P-320-Ex-0202.5	23K0808-20	Soil		-	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0808

Date Received: 11/6/2023

Field Sample #: P-319-Ex-000.5 | Sampled: 11/2/2023 08:15

Sample ID: 23K0808-03

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1254 [2]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1260 [2]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 0:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.8	30-150		11/11/23 0:56
Decachlorobiphenyl [2]	92.0	30-150		11/11/23 0:56
Tetrachloro-m-xylene [1]	84.0	30-150		11/11/23 0:56
Tetrachloro-m-xylene [2]	79.1	30-150		11/11/23 0:56

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0808

Date Received: 11/6/2023

Field Sample #: P-319-Ex-000.5 | Sampled: 11/2/2023 08:15

Sample ID: 23K0808-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.4		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0808

Date Received: 11/6/2023

Field Sample #: P-320-Ex-000.5 | Sampled: 11/2/2023 08:30

Sample ID: 23K0808-16

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/23	11/11/23 1:13	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	92.9	30-150		11/11/23	1:13
Decachlorobiphenyl [2]	95.2	30-150		11/11/23	1:13
Tetrachloro-m-xylene [1]	101	30-150		11/11/23	1:13
Tetrachloro-m-xylene [2]	95.6	30-150		11/11/23	1:13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K0808

Date Received: 11/6/2023

Field Sample #: P-320-Ex-000.5 | Sampled: 11/2/2023 08:30

Sample ID: 23K0808-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.1		% Wt	1		SM 2540G	11/7/23	11/7/23 9:05	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K0808-03 [P-319-Ex-000.5]	B357371	11/07/23
23K0808-16 [P-320-Ex-000.5]	B357371	11/07/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K0808-03 [P-319-Ex-000.5]	B357389	10.3	10.0	11/07/23
23K0808-16 [P-320-Ex-000.5]	B357389	10.3	10.0	11/07/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B357389 - SW-846 3540C										
Blank (B357389-BLK1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.184*		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS (B357389-BS1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.7	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.2	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.0	30-150			
LCS Dup (B357389-BSD1)				Prepared: 11/07/23 Analyzed: 11/10/23						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		72.0	40-140	4.70	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.8	40-140	4.84	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.7	40-140	1.97	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.9	40-140	2.28	30	
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg wet	0.200		88.5	30-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B357389-BS1

Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.17	12.5

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B357389-BSD1 Date(s) Analyzed: 11/10/2023 11/10/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.14	
	2	0.000	-0.030	0.030	0.16	13.3
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

L1K08808 KF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-318-Ex-0607	11/2/2023	8:11			U		1				H											
2	P-318-Ex-0708	11/2/2023	8:12			U		1				H											
3	P-319-Ex-000.5	11/2/2023	8:15			U		1				X											
4	P-319-Ex-0.501	11/2/2023	8:16			U		1				H											
5	P-319-Ex-0101.5	11/2/2023	8:17			U		1				H											
6	P-319-Ex-01.502	11/2/2023	8:18			U		1				H											
7	P-319-Ex-0202.5	11/2/2023	8:19			U		1				H											
8	P-319-Ex-02.503	11/2/2023	8:20			U		1				H											
9	P-319-Ex-0303.5	11/2/2023	8:21			U		1				H											
10	P-319-Ex-03.504	11/2/2023	8:22			U		3				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
11	P-319-Ex-0404.5	11/2/2023	8:23			U		1				H											
12	P-319-Ex-04.505	11/2/2023	8:24			U		1				H											
13	P-319-Ex-0506	11/2/2023	8:25			U		1				H											
14	P-319-Ex-0607	11/2/2023	8:26			U		1				H											
15	P-319-Ex-0708	11/2/2023	8:27			U		1				H											
16	P-320-Ex-000.5	11/2/2023	8:30			U		1				X											
17	P-320-Ex-0.501	11/2/2023	8:31			U		1				H											
18	P-320-Ex-0101.5	11/2/2023	8:32			U		1				H											
19	P-320-Ex-01.502	11/2/2023	8:33			U		1				H											
20	P-320-Ex-0202.5	11/2/2023	8:34			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NobisS

Project St. Johnsbury Armory

MCP/RCP Required no

Deliverable Package Requirement none

Location St. Johnsbury, VT

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time Mcm 11/6/23 1630

Back-Sheet By / Date / Time Mcm 11/6/23 2305

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 25.29

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear			1	1							↓	3	1	←								
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 4, 2023

Tim Andrews
Nobis Engineering
585 Middlesex Street
Lowell, MA 01851

Project Location: St. Johnsbury, VT
Client Job Number:
Project Number: S00001.017
Laboratory Work Order Number: 23K2921

Enclosed are results of analyses for samples as received by the laboratory on November 21, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

23K2921-01 5

23K2921-02 7

23K2921-03 9

23K2921-04 11

23K2921-05 13

23K2921-06 15

23K2921-07 17

23K2921-08 19

23K2921-09 21

Sample Preparation Information 23

QC Data 24

Polychlorinated Biphenyls with 3540 Soxhlet Extraction 24

B359128 24

Dual Column RPD Report 25

Flag/Qualifier Summary 32

Certifications 33

Chain of Custody/Sample Receipt 34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Nobis Engineering
585 Middlesex Street
Lowell, MA 01851
ATTN: Tim Andrews

REPORT DATE: 12/4/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: S00001.017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K2921

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: St. Johnsbury, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
P-308-Ex-0.501	23K2921-01	Soil		SM 2540G	
				SW-846 8082A	
P-313-Ex-0.501	23K2921-02	Soil		SM 2540G	
				SW-846 8082A	
P-314-Ex-0.501	23K2921-03	Soil		SM 2540G	
				SW-846 8082A	
P-315-Ex-0.501	23K2921-04	Soil		SM 2540G	
				SW-846 8082A	
P-315-Ex-0101.5	23K2921-05	Soil		SM 2540G	
				SW-846 8082A	
P-316-Ex-0.501	23K2921-06	Soil		SM 2540G	
				SW-846 8082A	
P-321-Ex-0.501	23K2921-07	Soil		SM 2540G	
				SW-846 8082A	
P-323-Ex-0.501	23K2921-08	Soil		SM 2540G	
				SW-846 8082A	
P-326-Ex-0.501	23K2921-09	Soil		SM 2540G	
				SW-846 8082A	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SM 2540G

Qualifications:

H-06

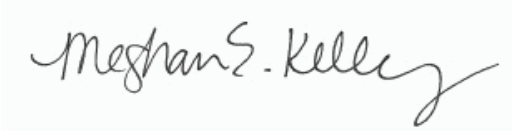
Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

% Solids

23K2921-01[P-308-Ex-0.501], 23K2921-02[P-313-Ex-0.501], 23K2921-03[P-314-Ex-0.501], 23K2921-04[P-315-Ex-0.501], 23K2921-05[P-315-Ex-0101.5], 23K2921-06[P-316-Ex-0.501], 23K2921-07[P-321-Ex-0.501], 23K2921-08[P-323-Ex-0.501], 23K2921-09[P-326-Ex-0.501]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-308-Ex-0.501 | Sampled: 11/1/2023 11:01

Sample ID: 23K2921-01

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:24	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.9	30-150		11/30/23 14:24
Decachlorobiphenyl [2]	89.6	30-150		11/30/23 14:24
Tetrachloro-m-xylene [1]	103	30-150		11/30/23 14:24
Tetrachloro-m-xylene [2]	93.8	30-150		11/30/23 14:24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-308-Ex-0.501 | Sampled: 11/1/2023 11:01

Sample ID: 23K2921-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.5		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-313-Ex-0.501 | Sampled: 11/1/2023 13:56

Sample ID: 23K2921-02

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1254 [1]	0.15	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:41	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.4	30-150		11/30/23 14:41
Decachlorobiphenyl [2]	91.4	30-150		11/30/23 14:41
Tetrachloro-m-xylene [1]	95.2	30-150		11/30/23 14:41
Tetrachloro-m-xylene [2]	86.4	30-150		11/30/23 14:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-313-Ex-0.501 | Sampled: 11/1/2023 13:56

Sample ID: 23K2921-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.3		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-314-Ex-0.501 | Sampled: 11/1/2023 14:11

Sample ID: 23K2921-03

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1254 [1]	0.10	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 14:58	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.1	30-150		11/30/23 14:58
Decachlorobiphenyl [2]	95.5	30-150		11/30/23 14:58
Tetrachloro-m-xylene [1]	99.2	30-150		11/30/23 14:58
Tetrachloro-m-xylene [2]	90.4	30-150		11/30/23 14:58

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-314-Ex-0.501 | Sampled: 11/1/2023 14:11

Sample ID: 23K2921-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.7		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-315-Ex-0.501 | Sampled: 11/1/2023 14:26

Sample ID: 23K2921-04

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1260 [2]	1.3	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:14	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	103	30-150		11/30/23 15:14
Decachlorobiphenyl [2]	109	30-150		11/30/23 15:14
Tetrachloro-m-xylene [1]	108	30-150		11/30/23 15:14
Tetrachloro-m-xylene [2]	98.4	30-150		11/30/23 15:14

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-315-Ex-0.501 | Sampled: 11/1/2023 14:26

Sample ID: 23K2921-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-315-Ex-0101.5 | Sampled: 11/1/2023 14:27

Sample ID: 23K2921-05

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1260 [1]	0.097	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:31	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.6	30-150		11/30/23 15:31
Decachlorobiphenyl [2]	81.6	30-150		11/30/23 15:31
Tetrachloro-m-xylene [1]	88.1	30-150		11/30/23 15:31
Tetrachloro-m-xylene [2]	79.2	30-150		11/30/23 15:31

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-315-Ex-0101.5 | Sampled: 11/1/2023 14:27

Sample ID: 23K2921-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.0		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-316-Ex-0.501 | Sampled: 11/1/2023 14:41

Sample ID: 23K2921-06

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1254 [1]	0.11	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 15:48	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.6	30-150		11/30/23 15:48
Decachlorobiphenyl [2]	94.6	30-150		11/30/23 15:48
Tetrachloro-m-xylene [1]	101	30-150		11/30/23 15:48
Tetrachloro-m-xylene [2]	92.0	30-150		11/30/23 15:48

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-316-Ex-0.501 | Sampled: 11/1/2023 14:41

Sample ID: 23K2921-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.6		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-321-Ex-0.501 | Sampled: 11/2/2023 08:51

Sample ID: 23K2921-07

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1254 [2]	0.20	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.8	30-150		11/30/23 16:05
Decachlorobiphenyl [2]	91.5	30-150		11/30/23 16:05
Tetrachloro-m-xylene [1]	96.9	30-150		11/30/23 16:05
Tetrachloro-m-xylene [2]	88.3	30-150		11/30/23 16:05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-321-Ex-0.501 | Sampled: 11/2/2023 08:51

Sample ID: 23K2921-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.0		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-323-Ex-0.501 | Sampled: 11/2/2023 09:31

Sample ID: 23K2921-08

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1254 [2]	0.23	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:22	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.5	30-150		11/30/23 16:22
Decachlorobiphenyl [2]	90.8	30-150		11/30/23 16:22
Tetrachloro-m-xylene [1]	94.2	30-150		11/30/23 16:22
Tetrachloro-m-xylene [2]	85.7	30-150		11/30/23 16:22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-323-Ex-0.501 | Sampled: 11/2/2023 09:31

Sample ID: 23K2921-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.1		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-326-Ex-0.501 | Sampled: 11/2/2023 10:31

Sample ID: 23K2921-09

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/28/23	11/30/23 16:38	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.2	30-150		11/30/23 16:38
Decachlorobiphenyl [2]	93.7	30-150		11/30/23 16:38
Tetrachloro-m-xylene [1]	99.6	30-150		11/30/23 16:38
Tetrachloro-m-xylene [2]	88.1	30-150		11/30/23 16:38

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: St. Johnsbury, VT | Sample Description: | Work Order: 23K2921

Date Received: 11/21/2023

Field Sample #: P-326-Ex-0.501 | Sampled: 11/2/2023 10:31

Sample ID: 23K2921-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1	H-06	SM 2540G	11/22/23	11/22/23 9:31	DV

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K2921-01 [P-308-Ex-0.501]	B358861	11/22/23
23K2921-02 [P-313-Ex-0.501]	B358861	11/22/23
23K2921-03 [P-314-Ex-0.501]	B358861	11/22/23
23K2921-04 [P-315-Ex-0.501]	B358861	11/22/23
23K2921-05 [P-315-Ex-0101.5]	B358861	11/22/23
23K2921-06 [P-316-Ex-0.501]	B358861	11/22/23
23K2921-07 [P-321-Ex-0.501]	B358861	11/22/23
23K2921-08 [P-323-Ex-0.501]	B358861	11/22/23
23K2921-09 [P-326-Ex-0.501]	B358861	11/22/23

Prep Method:SW-846 3540C **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K2921-01 [P-308-Ex-0.501]	B359128	10.4	10.0	11/28/23
23K2921-02 [P-313-Ex-0.501]	B359128	10.6	10.0	11/28/23
23K2921-03 [P-314-Ex-0.501]	B359128	10.3	10.0	11/28/23
23K2921-04 [P-315-Ex-0.501]	B359128	10.4	10.0	11/28/23
23K2921-05 [P-315-Ex-0101.5]	B359128	10.2	10.0	11/28/23
23K2921-06 [P-316-Ex-0.501]	B359128	10.5	10.0	11/28/23
23K2921-07 [P-321-Ex-0.501]	B359128	10.4	10.0	11/28/23
23K2921-08 [P-323-Ex-0.501]	B359128	10.4	10.0	11/28/23
23K2921-09 [P-326-Ex-0.501]	B359128	10.5	10.0	11/28/23

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359128 - SW-846 3540C										
Blank (B359128-BLK1)				Prepared: 11/28/23 Analyzed: 11/30/23						
Aroclor-1016	ND	0.019	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1221	ND	0.019	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1232	ND	0.019	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1242	ND	0.019	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1248	ND	0.019	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1254	ND	0.019	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1260	ND	0.019	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1262	ND	0.019	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1268	ND	0.019	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.019	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.178*		mg/Kg wet	0.187		95.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.187		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.177*		mg/Kg wet	0.187		94.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.171*		mg/Kg wet	0.187		91.5	30-150			
LCS (B359128-BS1)				Prepared: 11/28/23 Analyzed: 11/30/23						
Aroclor-1016	0.16	0.019	mg/Kg wet	0.187		84.5	40-140			
Aroclor-1016 [2C]	0.16	0.019	mg/Kg wet	0.187		85.4	40-140			
Aroclor-1260	0.17	0.019	mg/Kg wet	0.187		90.8	40-140			
Aroclor-1260 [2C]	0.17	0.019	mg/Kg wet	0.187		91.7	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.187		93.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.183*		mg/Kg wet	0.187		98.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.172*		mg/Kg wet	0.187		91.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.164*		mg/Kg wet	0.187		88.0	30-150			
LCS Dup (B359128-BSD1)				Prepared: 11/28/23 Analyzed: 11/30/23						
Aroclor-1016	0.16	0.019	mg/Kg wet	0.194		80.0	40-140	1.65	30	
Aroclor-1016 [2C]	0.16	0.019	mg/Kg wet	0.194		80.0	40-140	2.63	30	
Aroclor-1260	0.17	0.019	mg/Kg wet	0.194		86.4	40-140	1.15	30	
Aroclor-1260 [2C]	0.17	0.019	mg/Kg wet	0.194		87.5	40-140	0.918	30	
Surrogate: Decachlorobiphenyl	*0.180*		mg/Kg wet	0.194		92.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.189*		mg/Kg wet	0.194		97.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.170*		mg/Kg wet	0.194		87.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.162*		mg/Kg wet	0.194		83.6	30-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-313-Ex-0.501

Lab Sample ID: 23K2921-02 Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.13	14.3

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-315-Ex-0.501

Lab Sample ID: 23K2921-04

Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1260	1	0.000	-0.030	0.030	1.2	
	2	0.000	-0.030	0.030	1.3	8.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-315-Ex-0101.5

Lab Sample ID: 23K2921-05

Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1260	1	0.000	-0.030	0.030	0.097	
	2	0.000	-0.030	0.030	0.096	1.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-321-Ex-0.501

Lab Sample ID: 23K2921-07

Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.20	5.1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

P-323-Ex-0.501

Lab Sample ID: 23K2921-08

Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.23	4.4

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B359128-BS1 Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B359128-BSD1 Date(s) Analyzed: 11/30/2023 11/30/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-06	Sample was extracted past the recommended holding time.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

William Scott

From: Bridget Fortier <bfortier@nobis-group.com>
Sent: Monday, November 20, 2023 2:06 PM
To: ELONProjectManagers
Subject: S00001.017 St Johnsbury Armory - Additional Samples on Hold for Analysis
Attachments: 2023-11-3 Contest Chain.pdf

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

Im looking to have some samples from an older project on hold analyzed. Can you please have the following samples analyzed from the group you received on November 6th (Chain of Custody included for reference);

- P-308-Ex-0.501
- P-313-Ex-0.501
- P-314-Ex-0.501
- P-315-Ex-0.501
- P-315-Ex-0101.5
- P-316-Ex-0.501
- P-321-Ex-0.501
- P-323-Ex-0.501
- P-326-Ex-0.501

Let me know if you have any questions, thanks,

Bridget Fortier, EIT *(she/her/hers)*
Project Engineer

Nobis Group®
100% Employee-Owned
585 Middlesex Street, Lowell, MA 01851
p (978) 291-6995 **| c** (978) 399-9651

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-305-Ex-000.5	11/1/2023	9:00			U		1				X										
	P-305-Ex-0.501	11/1/2023	9:01			U		1				H										
	P-305-Ex-0101.5	11/1/2023	9:02			U		1				H										
	P-305-Ex-01.502	11/1/2023	9:03			U		1				H										
	P-305-Ex-0202.5	11/1/2023	9:04			U		1				H										
	P-305-Ex-02.503	11/1/2023	9:05			U		1				H										
	P-305-Ex-0303.5	11/1/2023	9:06			U		1				H										
	P-305-Ex-03.504	11/1/2023	9:07			U		1				H										
	P-305-Ex-0404.5	11/1/2023	9:08			U		1				H										
	P-305-Ex-04.505	11/1/2023	9:09			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-305-Ex-0506	11/1/2023	9:10			U		1				H										
	P-305-Ex-0607	11/1/2023	9:11			U		1				H										
	P-305-Ex-0708	11/1/2023	9:12			U		1				H										
	P-306-Ex-000.5	11/1/2023	9:30			U		1				X										
	P-306-Ex-0.501	11/1/2023	9:31			U		1				H										
	P-306-Ex-0101.5	11/1/2023	9:32			U		1				H										
	P-306-Ex-01.502	11/1/2023	9:33			U		1				H										
	P-306-Ex-0202.5	11/1/2023	9:34			U		1				H										
	P-306-Ex-02.503	11/1/2023	9:35			U		1				H										
	P-306-Ex-0303.5	11/1/2023	9:36			U		3				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-306-Ex-03.504	11/1/2023	9:37			U		1				H										
	P-306-Ex-0404.5	11/1/2023	9:38			U		1				H										
	P-306-Ex-04.505	11/1/2023	9:39			U		1				H										
	P-306-Ex-0506	11/1/2023	9:40			U		3				H										
	P-306-Ex-0607	11/1/2023	9:41			U		1				H										
	P-306-Ex-0708	11/1/2023	9:42			U		1				H										
	P-307-Ex-000.5	11/1/2023	10:20			U		1				X										
	P-307-Ex-0.501	11/1/2023	10:21			U		1				H										
	P-307-Ex-0101.5	11/1/2023	10:22			U		1				H										
	P-307-Ex-01.502	11/1/2023	10:23			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-307-Ex-0202.5	11/1/2023	10:24			U		1				H										
	P-307-Ex-02.503	11/1/2023	10:25			U		1				H										
	P-307-Ex-0303.5	11/1/2023	10:26			U		1				H										
	P-307-Ex-03.504	11/1/2023	10:27			U		1				H										
	P-307-Ex-0404.5	11/1/2023	10:28			U		1				H										
	P-307-Ex-04.505	11/1/2023	10:29			U		1				H										
	P-307-Ex-0506	11/1/2023	10:30			U		1				H										
	P-307-Ex-0607	11/1/2023	10:31			U		1				H										
	P-307-Ex-0708	11/1/2023	10:32			U		1				H										
	P-308-Ex-000.5	11/1/2023	11:00			U		1				X										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-308-Ex-0.501	11/1/2023	11:01			U		1				H										
	P-308-Ex-0101.5	11/1/2023	11:02			U		1				H										
	P-308-Ex-01.502	11/1/2023	11:03			U		1				H										
	P-308-Ex-0202.5	11/1/2023	11:04			U		1				H										
	P-308-Ex-02.503	11/1/2023	11:05			U		1				H										
	P-308-Ex-0303.5	11/1/2023	11:06			U		1				H										
	P-308-Ex-03.504	11/1/2023	11:07			U		1				H										
	P-308-Ex-0404.5	11/1/2023	11:08			U		1				H										
	P-308-Ex-04.505	11/1/2023	11:09			U		1				H										
	P-308-Ex-0506	11/1/2023	11:10			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-308-Ex-0607	11/1/2023	11:11			U		1				H										
	P-308-Ex-0708	11/1/2023	11:12			U		1				H										
	P-309-Ex-000.5	11/1/2023	11:50			U		1				X										
	P-309-Ex-0.501	11/1/2023	11:51			U		1				H										
	P-309-Ex-0101.5	11/1/2023	11:52			U		1				H										
	P-309-Ex-01.502	11/1/2023	11:53			U		1				H										
	P-309-Ex-0202.5	11/1/2023	11:54			U		1				H										
	P-309-Ex-02.503	11/1/2023	11:55			U		1				H										
	P-309-Ex-0303.5	11/1/2023	11:56			U		1				H										
	P-309-Ex-03.504	11/1/2023	11:57			U		3				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-309-Ex-0404.5	11/1/2023	11:58			U		1				H										
	P-309-Ex-04.505	11/1/2023	11:59			U		1				H										
	P-309-Ex-0506	11/1/2023	12:00			U		1				H										
	P-309-Ex-0607	11/1/2023	12:01			U		1				H										
	P-309-Ex-0708	11/1/2023	12:02			U		1				H										
	P-310-Ex-000.5	11/1/2023	12:40			U		1				X										
	P-310-Ex-0.501	11/1/2023	12:41			U		1				H										
	P-310-Ex-0101.5	11/1/2023	12:42			U		1				H										
	P-310-Ex-01.502	11/1/2023	12:43			U		1				H										
	P-310-Ex-0202.5	11/1/2023	12:44			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-310-Ex-02.503	11/1/2023	12:45			U		1				H										
	P-310-Ex-0303.5	11/1/2023	12:46			U		1				H										
	P-310-Ex-03.504	11/1/2023	12:47			U		1				H										
	P-310-Ex-0404.5	11/1/2023	12:48			U		1				H										
	P-310-Ex-04.505	11/1/2023	12:49			U		1				H										
	P-310-Ex-0506	11/1/2023	12:50			U		3				H										
	P-310-Ex-0607	11/1/2023	12:51			U		1				H										
	P-310-Ex-0708	11/1/2023	12:52			U		1				H										
	P-311-Ex-000.5	11/1/2023	13:20			U		1				X										
	P-311-Ex-0.501	11/1/2023	13:21			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-311-Ex-0101.5	11/1/2023	13:22			U		1				H										
	P-311-Ex-01.502	11/1/2023	13:23			U		1				H										
	P-311-Ex-0202.5	11/1/2023	13:24			U		1				H										
	P-311-Ex-02.503	11/1/2023	13:25			U		1				H										
	P-311-Ex-0303.5	11/1/2023	13:26			U		1				H										
	P-311-Ex-03.504	11/1/2023	13:27			U		1				H										
	P-311-Ex-0404.5	11/1/2023	13:28			U		1				H										
	P-311-Ex-04.505	11/1/2023	13:29			U		1				H										
	P-311-Ex-0506	11/1/2023	13:30			U		3				H										
	P-311-Ex-0607	11/1/2023	13:31			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-311-Ex-0708	11/1/2023	13:32			U		1				H										
	P-312-Ex-000.5	11/1/2023	13:40			U		1				X										
	P-312-Ex-0.501	11/1/2023	13:41			U		1				H										
	P-312-Ex-0101.5	11/1/2023	13:42			U		1				H										
	P-312-Ex-01.502	11/1/2023	13:43			U		1				H										
	P-312-Ex-0202.5	11/1/2023	13:44			U		1				H										
	P-312-Ex-02.503	11/1/2023	13:45			U		1				H										
	P-312-Ex-0303.5	11/1/2023	13:46			U		1				H										
	P-312-Ex-03.504	11/1/2023	13:47			U		1				H										
	P-312-Ex-0404.5	11/1/2023	13:48			U		1				H										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-312-Ex-04.505	11/1/2023	13:49			U		1				H										
	P-312-Ex-0506	11/1/2023	13:50			U		1				H										
	P-312-Ex-0607	11/1/2023	13:51			U		1				H										
	P-312-Ex-0708	11/1/2023	13:52			U		1				H										
	P-313-Ex-000.5	11/1/2023	13:55			U		3				X										
	P-313-Ex-0.501	11/1/2023	13:56			U		1				H										
	P-313-Ex-0101.5	11/1/2023	13:57			U		1				H										
	P-313-Ex-01.502	11/1/2023	13:58			U		1				H										
	P-313-Ex-0202.5	11/1/2023	13:59			U		1				H										
	P-313-Ex-02.503	11/1/2023	14:00			U		1				H										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

ab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-313-Ex-0303.5	11/1/2023	14:01			U		1				H										
	P-313-Ex-03.504	11/1/2023	14:02			U		1				H										
	P-313-Ex-0404.5	11/1/2023	14:03			U		1				H										
	P-313-Ex-04.505	11/1/2023	14:04			U		1				H										
	P-313-Ex-0506	11/1/2023	14:05			U		1				H										
	P-313-Ex-0607	11/1/2023	14:06			U		1				H										
	P-313-Ex-0708	11/1/2023	14:07			U		1				H										
	P-314-Ex-000.5	11/1/2023	14:10			U		1				X										
	P-314-Ex-0.501	11/1/2023	14:11			U		1				H										
	P-314-Ex-0101.5	11/1/2023	14:12			U		1				H										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-314-Ex-01.502	11/1/2023	14:13			U		1				H										
	P-314-Ex-0202.5	11/1/2023	14:14			U		1				H										
	P-314-Ex-02.503	11/1/2023	14:15			U		1				H										
	P-314-Ex-0303.5	11/1/2023	14:16			U		1				H										
	P-314-Ex-03.504	11/1/2023	14:17			U		1				H										
	P-314-Ex-0404.5	11/1/2023	14:18			U		1				H										
	P-314-Ex-04.505	11/1/2023	14:19			U		1				H										
	P-314-Ex-0506	11/1/2023	14:20			U		1				H										
	P-314-Ex-0607	11/1/2023	14:21			U		1				H										
	P-314-Ex-0708	11/1/2023	14:22			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											
	P-315-Ex-000.5	11/1/2023	14:25			U		1				X											
	P-315-Ex-0.501	11/1/2023	14:26			U		1				H											
	P-315-Ex-0101.5	11/1/2023	14:27			U		1				H											
	P-315-Ex-01.502	11/1/2023	14:28			U		1				H											
	P-315-Ex-0202.5	11/1/2023	14:29			U		1				H											
	P-315-Ex-02.503	11/1/2023	14:30			U		1				H											
	P-315-Ex-0303.5	11/1/2023	14:31			U		1				H											
	P-315-Ex-03.504	11/1/2023	14:32			U		1				H											
	P-315-Ex-0404.5	11/1/2023	14:33			U		1				H											
	P-315-Ex-04.505	11/1/2023	14:34			U		3				H											

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-315-Ex-0506	11/1/2023	14:35			U		1				H										
	P-315-Ex-0607	11/1/2023	14:36			U		1				H										
	P-315-Ex-0708	11/1/2023	14:37			U		1				H										
	P-316-Ex-000.5	11/1/2023	14:40			U		1				X										
	P-316-Ex-0.501	11/1/2023	14:41			U		1				H										
	P-316-Ex-0101.5	11/1/2023	14:42			U		1				H										
	P-316-Ex-01.502	11/1/2023	14:43			U		1				H										
	P-316-Ex-0202.5	11/1/2023	14:44			U		1				H										
	P-316-Ex-02.503	11/1/2023	14:45			U		1				H										
	P-316-Ex-0303.5	11/1/2023	14:46			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-316-Ex-03.504	11/1/2023	14:47			U		1				H										
	P-316-Ex-0404.5	11/1/2023	14:48			U		1				H										
	P-316-Ex-04.505	11/1/2023	14:49			U		1				H										
	P-316-Ex-0506	11/1/2023	14:50			U		1				H										
	P-316-Ex-0607	11/1/2023	14:51			U		1				H										
	P-316-Ex-0708	11/1/2023	14:52			U		3				H										
	P-317-Ex-000.5	11/1/2023	14:55			U		1				X										
	P-317-Ex-0.501	11/1/2023	14:56			U		1				H										
	P-317-Ex-0101.5	11/1/2023	14:57			U		1				H										
	P-317-Ex-01.502	11/1/2023	14:58			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-317-Ex-0202.5	11/1/2023	14:59			U		1				H										
	P-317-Ex-02.503	11/1/2023	15:00			U		1				H										
	P-317-Ex-0303.5	11/1/2023	15:01			U		1				H										
	P-317-Ex-03.504	11/1/2023	15:02			U		1				H										
	P-317-Ex-0404.5	11/1/2023	15:03			U		1				H										
	P-317-Ex-04.505	11/1/2023	15:04			U		1				H										
	P-317-Ex-0506	11/1/2023	15:05			U		1				H										
	P-317-Ex-0607	11/1/2023	15:06			U		1				H										
	P-317-Ex-0708	11/1/2023	15:07			U		1				H										
	P-318-Ex-000.5	11/2/2023	8:00			U		1				X										

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[2] Preservation Code

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-318-Ex-0.501	11/2/2023	8:01			U		1				H										
	P-318-Ex-0101.5	11/2/2023	8:02			U		1				H										
	P-318-Ex-01.502	11/2/2023	8:03			U		1				H										
	P-318-Ex-0202.5	11/2/2023	8:04			U		1				H										
	P-318-Ex-02.503	11/2/2023	8:05			U		1				H										
	P-318-Ex-0303.5	11/2/2023	8:06			U		1				H										
	P-318-Ex-03.504	11/2/2023	8:07			U		1				H										
	P-318-Ex-0404.5	11/2/2023	8:08			U		1				H										
	P-318-Ex-04.505	11/2/2023	8:09			U		1				H										
	P-318-Ex-0506	11/2/2023	8:10			U		3				H										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-318-Ex-0607	11/2/2023	8:11			U		1				H										
	P-318-Ex-0708	11/2/2023	8:12			U		1				H										
	P-319-Ex-000.5	11/2/2023	8:15			U		1				X										
	P-319-Ex-0.501	11/2/2023	8:16			U		1				H										
	P-319-Ex-0101.5	11/2/2023	8:17			U		1				H										
	P-319-Ex-01.502	11/2/2023	8:18			U		1				H										
	P-319-Ex-0202.5	11/2/2023	8:19			U		1				H										
	P-319-Ex-02.503	11/2/2023	8:20			U		1				H										
	P-319-Ex-0303.5	11/2/2023	8:21			U		1				H										
	P-319-Ex-03.504	11/2/2023	8:22			U		3				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-319-Ex-0404.5	11/2/2023	8:23			U		1				H										
	P-319-Ex-04.505	11/2/2023	8:24			U		1				H										
	P-319-Ex-0506	11/2/2023	8:25			U		1				H										
	P-319-Ex-0607	11/2/2023	8:26			U		1				H										
	P-319-Ex-0708	11/2/2023	8:27			U		1				H										
	P-320-Ex-000.5	11/2/2023	8:30			U		1				X										
	P-320-Ex-0.501	11/2/2023	8:31			U		1				H										
	P-320-Ex-0101.5	11/2/2023	8:32			U		1				H										
	P-320-Ex-01.502	11/2/2023	8:33			U		1				H										
	P-320-Ex-0202.5	11/2/2023	8:34			U		1				H										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Relinquished by: (signature) Date/Time:

Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-320-Ex-02.503	11/2/2023	8:35			U		1				H										
	P-320-Ex-0303.5	11/2/2023	8:36			U		1				H										
	P-320-Ex-03.504	11/2/2023	8:37			U		1				H										
	P-320-Ex-0404.5	11/2/2023	8:38			U		1				H										
	P-320-Ex-04.505	11/2/2023	8:39			U		1				H										
	P-320-Ex-0506	11/2/2023	8:40			U		1				H										
	P-320-Ex-0607	11/2/2023	8:41			U		1				H										
	P-320-Ex-0708	11/2/2023	8:42			U		1				H										
	P-321-Ex-000.5	11/2/2023	8:50			U		1				X										
	P-321-Ex-0.501	11/2/2023	8:51			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-321-Ex-0101.5	11/2/2023	8:52			U		1				H										
	P-321-Ex-01.502	11/2/2023	8:53			U		1				H										
	P-321-Ex-0202.5	11/2/2023	8:54			U		1				H										
	P-321-Ex-02.503	11/2/2023	8:55			U		1				H										
	P-321-Ex-0303.5	11/2/2023	8:56			U		1				H										
	P-321-Ex-03.504	11/2/2023	8:57			U		1				H										
	P-321-Ex-0404.5	11/2/2023	8:58			U		1				H										
	P-321-Ex-04.505	11/2/2023	8:59			U		1				H										
	P-321-Ex-0506	11/2/2023	9:00			U		1				H										
	P-321-Ex-0607	11/2/2023	9:01			U		3				H										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-321-Ex-0708	11/2/2023	9:02			U		1				H										
	P-322-Ex-000.5	11/2/2023	9:10			U		1				X										
	P-322-Ex-0.501	11/2/2023	9:11			U		1				H										
	P-322-Ex-0101.5	11/2/2023	9:12			U		1				H										
	P-322-Ex-01.502	11/2/2023	9:13			U		1				H										
	P-322-Ex-0202.5	11/2/2023	9:14			U		1				H										
	P-322-Ex-02.503	11/2/2023	9:15			U		1				H										
	P-322-Ex-0303.5	11/2/2023	9:16			U		1				H										
	P-322-Ex-03.504	11/2/2023	9:17			U		1				H										
	P-322-Ex-0404.5	11/2/2023	9:18			U		1				H										

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-322-Ex-04.505	11/2/2023	9:19			U		3				H										
	P-322-Ex-0506	11/2/2023	9:20			U		1				H										
	P-322-Ex-0607	11/2/2023	9:21			U		1				H										
	P-322-Ex-0708	11/2/2023	9:22			U		1				H										
	P-323-Ex-000.5	11/2/2023	9:30			U		1				X										
	P-323-Ex-0.501	11/2/2023	9:31			U		1				H										
	P-323-Ex-0101.5	11/2/2023	9:32			U		1				H										
	P-323-Ex-01.502	11/2/2023	9:33			U		1				H										
	P-323-Ex-0202.5	11/2/2023	9:34			U		1				H										
	P-323-Ex-02.503	11/2/2023	9:35			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

ab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-323-Ex-0303.5	11/2/2023	9:36			U		1				H										
	P-323-Ex-03.504	11/2/2023	9:37			U		1				H										
	P-323-Ex-0404.5	11/2/2023	9:38			U		1				H										
	P-323-Ex-04.505	11/2/2023	9:39			U		1				H										
	P-323-Ex-0506	11/2/2023	9:40			U		1				H										
	P-323-Ex-0607	11/2/2023	9:41			U		3				H										
	P-323-Ex-0708	11/2/2023	9:42			U		1				H										
	P-324-Ex-000.5	11/2/2023	9:50			U		1				X										
	P-324-Ex-0.501	11/2/2023	9:52			U		1				H										
	P-324-Ex-0101.5	11/2/2023	9:53			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-324-Ex-01.502	11/2/2023	9:53			U		1				H										
	P-324-Ex-0202.5	11/2/2023	9:54			U		1				H										
	P-324-Ex-02.503	11/2/2023	9:55			U		1				H										
	P-324-Ex-0303.5	11/2/2023	9:56			U		1				H										
	P-324-Ex-03.504	11/2/2023	9:57			U		1				H										
	P-324-Ex-0404.5	11/2/2023	9:58			U		1				H										
	P-324-Ex-04.505	11/2/2023	9:59			U		1				H										
	P-324-Ex-0506	11/2/2023	10:00			U		1				H										
	P-324-Ex-0607	11/2/2023	10:01			U		1				H										
	P-324-Ex-0708	11/2/2023	10:02			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-325-Ex-000.5	11/2/2023	10:10			U		3				X										
	P-325-Ex-0.501	11/2/2023	10:11			U		1				H										
	P-325-Ex-0101.5	11/2/2023	10:12			U		1				H										
	P-325-Ex-01.502	11/2/2023	10:13			U		1				H										
	P-325-Ex-0202.5	11/2/2023	10:14			U		1				H										
	P-325-Ex-02.503	11/2/2023	10:15			U		1				H										
	P-325-Ex-0303.5	11/2/2023	10:16			U		1				H										
	P-325-Ex-03.504	11/2/2023	10:17			U		1				H										
	P-325-Ex-0404.5	11/2/2023	10:18			U		1				H										
	P-325-Ex-04.505	11/2/2023	10:19			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-325-Ex-0506	11/2/2023	10:20			U		1				H										
	P-325-Ex-0607	11/2/2023	10:21			U		1				H										
	P-325-Ex-0708	11/2/2023	10:22			U		1				H										
	P-326-Ex-000.5	11/2/2023	10:30			U		3				X										
	P-326-Ex-0.501	11/2/2023	10:31			U		1				H										
	P-326-Ex-0101.5	11/2/2023	10:32			U		1				H										
	P-326-Ex-01.502	11/2/2023	10:33			U		1				H										
	P-326-Ex-0202.5	11/2/2023	10:34			U		1				H										
	P-326-Ex-02.503	11/2/2023	10:35			U		1				H										
	P-326-Ex-0303.5	11/2/2023	10:36			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-326-Ex-03.504	11/2/2023	10:37			U		1				H										
	P-326-Ex-0404.5	11/2/2023	10:38			U		1				H										
	P-326-Ex-04.505	11/2/2023	10:39			U		1				H										
	P-326-Ex-0506	11/2/2023	10:40			U		1				H										
	P-326-Ex-0607	11/2/2023	10:41			U		1				H										
	P-326-Ex-0708	11/2/2023	10:42			U		1				H										
	P-327-Ex-000.5	11/2/2023	10:45			U		1				X										
	P-327-Ex-0.501	11/2/2023	10:46			U		1				H										
	P-327-Ex-0101.5	11/2/2023	10:47			U		1				H										
	P-327-Ex-01.502	11/2/2023	10:48			U		1				H										

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-327-Ex-0202.5	11/2/2023	10:49			U		1				H										
	P-327-Ex-02.503	11/2/2023	10:50			U		1				H										
	P-327-Ex-0303.5	11/2/2023	10:51			U		1				H										
	P-327-Ex-03.504	11/2/2023	10:52			U		1				H										
	P-327-Ex-0404.5	11/2/2023	10:53			U		1				H										
	P-327-Ex-04.505	11/2/2023	10:54			U		1				H										
	P-327-Ex-0506	11/2/2023	10:55			U		1				H										
	P-327-Ex-0607	11/2/2023	10:56			U		1				H										
	P-327-Ex-0708	11/2/2023	10:57			U		1				H										
	P-328-Ex-0606.5	11/2/2023	10:58			U		1				X										

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-328-Ex-06.507	11/2/2023	10:58			U		1				H										
	P-328-Ex-0707.5	11/2/2023	10:59			U		1				H										
	P-328-Ex-07.508	11/2/2023	11:00			U		1				H										
	P-328-Ex-0808.5	11/2/2023	11:01			U		1				H										
	P-328-Ex-08.509	11/2/2023	11:02			U		1				H										
	P-328-Ex-0909.5	11/2/2023	11:03			U		1				H										
	P-328-Ex-09.510	11/2/2023	11:04			U		1				H										
	P-328-Ex-1010.5	11/2/2023	11:05			U		1				H										
	P-328-Ex-10.511	11/2/2023	11:06			U		1				H										
	P-328-Ex-1112	11/2/2023	11:07			U		3				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
	P-329-Ex	11/2/2023	11:09			U		1				H										
	P-330-Ex	11/2/2023	11::10			U		1				H										
	P-331-Ex	11/2/2023	11:11			U		1				H										
	P-FD019	11/1/2023	8:00			U		1				H										
	P-FD020	11/1/2023	8:01			U		1				H										
	P-FD021	11/1/2023	8:02			U		1				H										
	P-FD022	11/1/2023	8:03			U		1				H										
	P-FD023	11/1/2023	8:04			U		1				H										
	P-FD024	11/1/2023	8:05			U		1				X										
	P-FD025	11/1/2023	8:06			U		1				H										

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

ab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
	P-FD026	11/1/2023	8:07			U		1				H											I
	P-FD027	11/2/2023	16:00			U		1				H											
	P-FD028	11/2/2023	16:01			U		1				X											
	P-FD029	11/2/2023	16:02			U		1				X											
	P-FD030	11/2/2023	16:03			U		1				H											
	P-FD031	11/2/2023	16:04			U		1				H											
	P-FD032	11/2/2023	16:05			U		1				H											
	P-FD033	11/2/2023	16:06			U		1				H											
	P-FD034	11/2/2023	16:07			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; **M** - Medium; **L** - Low; **C** - Clean; **U** - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

ab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

APPENDIX C

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-305-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	16	0-2				/ 0.1 ASPHALT / SAND / 0.5	S-1A (1"): Light brown, fine to coarse SAND, some fine Gravel, few asphalt fragments. Dry. S-1B (1"): Dark brown, fine SAND, some Silt. Dry. S-1C (4"): Tan, fine SAND. Dry. S-1D (10"): Light brown, fine SAND, some Clay, trace Silt. Dry.	
2							CLAYEY SAND / 2.0		
3	S-2	20	2-4					S-2A (20"): Tan, fine to medium SAND. Dry.	
4									
5	S-3	21	4-6				SAND	S-3A (3"): Brown, fine to medium SAND. Dry. S-3B (17"): Light gray, fine to medium SAND. Dry.	
6									
7	S-4	23	6-8					S-4A (3"): Dark brown, fine to medium SAND. Dry. S-4B (15"): Light tan, fine to medium SAND, trace Silt. Dry.	
8							/ 7.5 SILT / 8.0	S-4C (5"): Light tan, SILT and fine Sand. Dry.	
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-305-EX-0000.5, P-305-EX-00.501, P-305-EX-0101.5, P-305-EX-01.502, P-305-EX-0202.5, P-305-EX-02.5-03, P-305-EX-0303.5, P-305-EX-03.504, P-305-EX-0404.5, P-305-EX-04.505, P-305-EX-0506, P-305-EX-0607, P-305-EX-0708.

2) Sample collection began at 09:00 and concluded at 09:12. Sample P-305-EX-0506 associated with FD-19.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-306-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	21	0-2				ASPHALT / 0.3	S-1A (3"): Black, asphalt. Dry.	
							CLAYEY SAND / 0.9	S-1B (8"): Tan, fine to coarse SAND, some Clay. Dry.	
2							SILTY SAND / 2.0	S-1C (10"): Dark brown, fine to coarse SAND, some Silt. Dry.	
3	S-2	24	2-4				SAND	S-2A (24"): Light gray, fine SAND. Dry.	
4							/ 4.0		
5	S-3	24	4-6				SILTY SAND / 4.4	S-3A (5"): Dark brown, fine SAND, some Silt. Dry.	
							SAND	S-3B (19"): Light brown, fine to coarse SAND. Dry.	
6							/ 6.0		
7	S-4	24	6-8				SILTY SAND	S-4A (5"): Light brown, fine to medium SAND, some Silt. Dry. S-4B (5"): Tan, fine to coarse SAND, some Silt. Dry. S-4C (14"): Tan, fine SAND and Silt. Wet.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-306-EX-0000.5, P-306-EX-00.501, P-306-EX-0101.5, P-306-EX-01.502, P-306-EX-0202.5, P-306-EX-02.5-03, P-306-EX-0303.5, P-306-EX-03.504, P-306-EX-0404.5, P-306-EX-04.505, P-306-EX-0506, P-306-EX-0607, P-306-EX-0708.

2) Sample collection began at 09:30 and concluded at 09:42.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-307-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Sample Info: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	20	0-2				FILL / 1.0	S-1A (12"): Brown, fine SAND, and brick fragments. Dry.	
2							SAND / 2.0	S-1B (8"): Brown, fine to medium SAND. Dry.	
3	S-2	23	2-4				SILTY SAND / 4.0	S-2A (23"): Tan, fine to medium SAND, some Silt. Dry.	
4									
5	S-3	22	4-6				SAND	S-3A (19"): Tan, fine to coarse SAND. Dry.	
6							/ 6.0	S-3B (3"): Dark brown, fine to coarse SAND. Dry.	
7	S-4	24	6-8				SILTY SAND	S-4A (24"): Tan, fine SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-307-EX-0000.5, P-307-EX-00.501, P-307-EX-0101.5, P-307-EX-01.502, P-307-EX-0202.5, P-307-EX-02.5-03, P-307-EX-0303.5, P-307-EX-03.504, P-307-EX-0404.5, P-307-EX-04.505, P-307-EX-0506, P-307-EX-0607, P-307-EX-0708.

2) Sample collection began at 10:20 and concluded at 10:32. Sample P-307-EX-0506 associated with FD-20.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-308-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Sample Info: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	Sample Description and Remarks (Classification System: Modified Burmister)	Notes
1	S-1	18	0-2				FILL	S-1A (8"): Light gray/brown, fine SAND, some fine to coarse Gravel. Dry. S-1B (10"): Red-brown, fine SAND, several wood and concrete fragments. Dry.	
2							/ 2.0		
3	S-2	22	2-4				SAND	S-2A (22"): Tan, fine to coarse SAND. Dry.	
4							/ 4.0		
5	S-3	20	4-6				SILTY SAND	S-3A (20"): Tan, fine SAND, some Silt. Dry.	
6									
7	S-4	24	6-8					S-4A (24"): Tan, fine SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-308-EX-0000.5, P-308-EX-00.501, P-308-EX-0101.5, P-308-EX-01.502, P-308-EX-0202.5, P-308-EX-02.5-03, P-308-EX-0303.5, P-308-EX-03.504, P-308-EX-0404.5, P-308-EX-04.505, P-308-EX-0506, P-308-EX-0607, P-308-EX-0708.

2) Sample collection began at 10:00 and concluded at 11:12. Sample P-308-EX-0607 associated with FD-21.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-309-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Sample Info: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	Sample Description and Remarks (Classification System: Modified Burmister)	Notes
1	S-1	19	0-2					S-1A (6"): Gray, asphalt. Dry.	
								S-1B (13"): Brown, fine to medium SAND, numerous brick fragments. Dry.	
2							FILL / 2.0		
3	S-2	24	2-4					S-2A (24"): Tan, fine to medium SAND, some Silt. Dry.	
4									
5	S-3	24	4-6				SILTY SAND	S-3A (24"): Tan, fine to medium SAND, some Silt. Dry.	
6									
7	S-4	24	6-8					S-4A (24"): Tan, fine to medium SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-309-EX-0000.5, P-309-EX-00.501, P-309-EX-0101.5, P-309-EX-01.502, P-309-EX-0202.5, P-309-EX-02.5-03, P-309-EX-0303.5, P-309-EX-03.504, P-309-EX-0404.5, P-309-EX-04.505, P-309-EX-0506, P-309-EX-0607, P-309-EX-0708.

2) Sample collection began at 11:50 and concluded at 12:02.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-310-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	S-1	14	0-2				ASPHALT / 0.4	S-1A (5"): Gray, asphalt. Dry.	
1								S-1B (9"): Tan, fine to medium SAND, some Silt. Dry.	
2									
	S-2	24	2-4					S-2A (24"): Tan, fine to medium SAND, some Silt. Dry.	
3									
4							SILTY SAND		
	S-3	24	4-6					S-3A (24"): Tan, fine to medium SAND, some Silt. Dry.	
5									
6									
	S-4	24	6-8				/ 6.5	S-4A (6"): Tan, fine to coarse SAND, some Silt. Dry.	
7							CLAYEY SAND / 7.3	S-4B (10"): Tan, fine to coarse SAND and Clay, some Silt. Wet.	
8							SILTY SAND / 8.0	S-4C (8"): Tan, fine to medium SAND, some Silt. Wet.	
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-310-EX-0000.5, P-310-EX-00.501, P-310-EX-0101.5, P-310-EX-01.502, P-310-EX-0202.5, P-310-EX-02.5-03, P-310-EX-0303.5, P-310-EX-03.504, P-310-EX-0404.5, P-310-EX-04.505, P-310-EX-0506, P-310-EX-0607, P-310-EX-0708.

2) Sample collection began at 12:40 and concluded at 12:52. Sample P-310-EX-0303.5 associated with FD-22.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-311-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	14	0-2				ASPHALT / 0.3	S-1A (4"): Gray, asphalt. Dry.	
								S-1B (10"): Tan, fine to medium SAND, some Silt. Dry.	
2									
3	S-2	21	2-4					S-2A (21"): Tan, fine to medium SAND, some Silt. Dry.	
4									
5	S-3	24	4-6				SILTY SAND	S-3A (24"): Tan, fine SAND, some Silt. Dry.	
6									
7	S-4	24	6-8					S-4A (24"): Tan, fine SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-311-EX-0000.5, P-311-EX-00.501, P-311-EX-0101.5, P-311-EX-01.502, P-311-EX-0202.5, P-311-EX-02.5-03, P-311-EX-0303.5, P-311-EX-03.504, P-311-EX-0404.5, P-311-EX-04.505, P-311-EX-0506, P-311-EX-0607, P-311-EX-0708.

2) Sample collection began at 13:20 and concluded at 13:32.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-312-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	17	0-2				ASPHALT / 0.3	S-1A (4"): Black, asphalt. Dry.	
								S-1B (13"): Tan, fine to medium SAND, some Silt. Dry.	
2									
3	S-2	22	2-4					S-2A (22"): Gray/tan, fine SAND, some Silt. Dry.	
4									
5	S-3	22	4-6				SILTY SAND	S-3A (22"): Tan, fine to medium SAND, some Silt. Dry.	
6									
7	S-4	23	6-8					S-4A (23"): Tan, fine to medium SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-312-EX-0000.5, P-312-EX-00.501, P-312-EX-0101.5, P-312-EX-01.502, P-312-EX-0202.5, P-312-EX-02.5-03, P-312-EX-0303.5, P-312-EX-03.504, P-312-EX-0404.5, P-312-EX-04.505, P-312-EX-0506, P-312-EX-0607, P-312-EX-0708.

2) Sample collection began at 13:40 and concluded at 13:52. Sample P-312-EX-0404.5 associated with FD-23.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-313-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	19	0-2					S-1A (19"): Dark brown, fine to medium SAND. Dry.	
2							SAND		
3	S-2	18	2-4					S-2A (18"): Dark brown, fine to medium SAND. Dry.	
4							/ 4.0		
5	S-3	24	4-6					S-3A (24"): Light brown, fine to medium SAND, some Silt. Dry.	
6							SILTY SAND		
7	S-4	24	6-8					S-4A (24"): Light brown, fine to medium SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-313-EX-0000.5, P-313-EX-00.501, P-313-EX-0101.5, P-313-EX-01.502, P-313-EX-0202.5, P-313-EX-02.5-03, P-313-EX-0303.5, P-313-EX-03.504, P-313-EX-0404.5, P-313-EX-04.505, P-313-EX-0506, P-313-EX-0607, P-313-EX-0708.

2) Sample collection began at 13:55 and concluded at 14:07.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:47 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-314-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	18	0-2				SAND / 0.7	S-1A (8"): Dark brown, fine to medium SAND. Dry.	
2								S-1B (10"): Brown, fine to medium SAND, trace Silt. Dry.	
3	S-2	18	2-4					S-2A (18"): Brown, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	20	4-6				SILTY SAND	S-3A (20"): Brown, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	24	6-8					S-4A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-314-EX-0000.5, P-314-EX-00.501, P-314-EX-0101.5, P-314-EX-01.502, P-314-EX-0202.5, P-314-EX-02.5-03, P-314-EX-0303.5, P-314-EX-03.504, P-314-EX-0404.5, P-314-EX-04.505, P-314-EX-0506, P-314-EX-0607, P-314-EX-0708.

2) Sample collection began at 14:10 and concluded at 14:22. Sample P-314-EX-000.5 associated with FD-24.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-315-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	20	0-2					S-1A (20"): Brown, fine to medium SAND, trace Silt. Dry.	
2									
3	S-2	18	2-4					S-2A (18"): Brown, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	22	4-6				SILTY SAND	S-3A (22"): Brown, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	22	6-8					S-4A (22"): Brown, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-315-EX-0000.5, P-315-EX-00.501, P-315-EX-0101.5, P-315-EX-01.502, P-315-EX-0202.5, P-315-EX-02.5-03, P-315-EX-0303.5, P-315-EX-03.504, P-315-EX-0404.5, P-315-EX-04.505, P-315-EX-0506, P-315-EX-0607, P-315-EX-0708.

2) Sample collection began at 14:25 and concluded at 14:37. Sample P-315-EX-0202.5 associated with FD-25.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-316-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	S-1	19	0-2				SILTY SAND / 0.5	S-1A (6"): Dark brown, fine to medium SAND, trace Silt. Dry.	
1								S-1B (13"): Brown, fine to medium SAND. Dry.	
							SAND		
2							/ 2.0		
	S-2	22	2-4					S-2A (22"): Brown, fine to medium SAND, trace Silt. Dry.	
3									
4									
	S-3	22	4-6					S-3A (22"): Tan, fine to medium SAND, trace Silt. Dry.	
5							SILTY SAND		
6									
	S-4	24	6-8					S-4A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
7									
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-316-EX-0000.5, P-316-EX-00.501, P-316-EX-0101.5, P-316-EX-01.502, P-316-EX-0202.5, P-316-EX-02.5-03, P-316-EX-0303.5, P-316-EX-03.504, P-316-EX-0404.5, P-316-EX-04.505, P-316-EX-0506, P-316-EX-0607, P-316-EX-0708.

2) Sample collection began at 14:40 and concluded at 14:52. Sample P-316-EX-03.504 associated with FD-26.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-317-Ex**

Boring Location:

Checked by:

Date Start: November 1, 2023

Date Finish: November 1, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Sample Info: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	Sample Description and Remarks (Classification System: Modified Burmister)	Notes
1	S-1	17	0-2				ASPHALT / 0.2	S-1A (2"): Gray, asphalt. Dry. S-1B (15"): Tan, fine to medium SAND. Dry.	
2									
3	S-2	23	2-4				SAND	S-2A (23"): Tan, fine to medium SAND. Dry.	
4							/ 4.0		
5	S-3	24	4-6					S-3A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	24	6-8				SILTY SAND	S-4A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-317-EX-0000.5, P-317-EX-00.501, P-317-EX-0101.5, P-317-EX-01.502, P-317-EX-0202.5, P-317-EX-02.5-03, P-317-EX-0303.5, P-317-EX-03.504, P-317-EX-0404.5, P-317-EX-04.505, P-317-EX-0506, P-317-EX-0607, P-317-EX-0708.

2) Sample collection began at 14:55 and concluded at 15:07.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-318-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	22	0-2					S-1A (12"): Brown, fine to medium SAND, trace Silt. Dry.	
2								S-1B (10"): Brown, fine to medium SAND, trace Silt & Clay. Dry.	
3	S-2	23	2-4					S-2A (23"): Tan, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	24	4-6				SILTY SAND	S-3A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	23	6-8					S-4A (23"): Tan, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-318-EX-0000.5, P-318-EX-00.501, P-318-EX-0101.5, P-318-EX-01.502, P-318-EX-0202.5, P-318-EX-02.5-03, P-318-EX-0303.5, P-318-EX-03.504, P-318-EX-0404.5, P-318-EX-04.505, P-318-EX-0506, P-318-EX-0607, P-318-EX-0708.

2) Sample collection began at 08:00 and concluded at 08:12. Sample P-318-EX-0404.5 associated with FD-27.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-319-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	22	0-2					S-1A (10"): Brown, fine to medium SAND, trace Silt. Dry.	
								S-1B (2"): Brown, fine to coarse GRAVEL, trace Silt. Dry.	
2								S-1C (10"): Brown, fine to medium SAND, trace Silt. Dry.	
3	S-2	22	2-4					S-2A (22"): Tan, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	24	4-6				SAND	S-3A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	24	6-8					S-4A: Tan, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-319-EX-0000.5, P-319-EX-00.501, P-319-EX-0101.5, P-319-EX-01.502, P-319-EX-0202.5, P-319-EX-02.5-03, P-319-EX-0303.5, P-319-EX-03.504, P-319-EX-0404.5, P-319-EX-04.505, P-319-EX-0506, P-319-EX-0607, P-319-EX-0708.

2) Sample collection began at 08:15 and concluded at 08:27. Sample P-319-EX-0000.5 associated with FD-28.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-320-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	12	0-2				GRAVELLY SAND	S-1A (12"): Tan, fine to medium SAND, trace fine Gravel, trace Silt.	
2							/ 2.0		
3	S-2	22	2-4					S-2A (22"): Tan, fine to medium SAND, trace Silt.	
4									
5	S-3	24	4-6				SILTY SAND	S-3A (24"): Tan, fine to medium SAND, trace Silt.	
6									
7	S-4	24	6-8					S-4A (24"): Tan, fine to medium SAND, trace Silt.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-320-EX-0000.5, P-320-EX-00.501, P-320-EX-0101.5, P-320-EX-01.502, P-320-EX-0202.5, P-320-EX-02.5-03, P-320-EX-0303.5, P-320-EX-03.504, P-320-EX-0404.5, P-320-EX-04.505, P-320-EX-0506, P-320-EX-0607, P-320-EX-0708.

2) Sample collection began at 08:30 and concluded at 08:42.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-321-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Sample Info: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	18	0-2				SAND / 1.3	S-1A (15"): Tan, fine to medium SAND, trace Silt. Dry.	
2							CLAYEY SAND / 2.0	S-1B (3"): Brown, fine to medium SAND, trace Silt & Clay. Dry.	
3	S-2	20	2-4					S-2A (20"): Tan, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	22	4-6				SAND	S-3A (22"): Tan, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	22	6-8					S-4A (22"): Tan, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-321-EX-0000.5, P-321-EX-00.501, P-321-EX-0101.5, P-321-EX-01.502, P-321-EX-0202.5, P-321-EX-02.5-03, P-321-EX-0303.5, P-321-EX-03.504, P-321-EX-0404.5, P-321-EX-04.505, P-321-EX-0506, P-321-EX-0607, P-321-EX-0708.

2) Sample collection began at 08:50 and concluded at 09:02. Sample P-321-EX-0000.5 associated with FD-29.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-322-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	Sample Info: Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	Lithology: Graphic	Stratum Elev. / Depth (ft.)	Sample Description and Remarks (Classification System: Modified Burmister)	Notes
1	S-1	21	0-2					S-1A (2"): Brown, fine SAND, trace Silt. Dry. S-1B (19"): Tan, fine to medium SAND, trace Silt. Dry.	
2									
3	S-2	22	2-4					S-2A (22"): Tan, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	23	4-6				SAND	S-3A (23"): Tan, fine to medium SAND, trace Silt. Dry.	
6									
7	S-4	23	6-8					S-4A (8"): Tan, fine to medium SAND, trace Silt. Dry. S-4B (15"): Tan, fine SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-322-EX-0000.5, P-322-EX-00.501, P-322-EX-0101.5, P-322-EX-01.502, P-322-EX-0202.5, P-322-EX-02.5-03, P-322-EX-0303.5, P-322-EX-03.504, P-322-EX-0404.5, P-322-EX-04.505, P-322-EX-0506, P-322-EX-0607, P-322-EX-0708.

2) Sample collection began at 09:10 and concluded at 09:22. Sample P-322-EX-03.504 associated with FD-30.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-323-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	20	0-2					S-1A (20"): Tan, fine to medium SAND, trace Silt.	
2									
3	S-2	20	2-4					S-2A (20"): Tan, fine to medium SAND, trace Silt.	
4									
5	S-3	18	4-6				SAND	S-3A (18"): Tan, fine to coarse SAND, trace Silt.	
6									
7	S-4	24	6-8					S-4A (2"): Brown, fine to medium SAND, trace Silt. S-4B (22"): Tan, fine to medium SAND, trace Silt.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-323-EX-0000.5, P-323-EX-00.501, P-323-EX-0101.5, P-323-EX-01.502, P-323-EX-0202.5, P-323-EX-02.5-03, P-323-EX-0303.5, P-323-EX-03.504, P-323-EX-0404.5, P-323-EX-04.505, P-323-EX-0506, P-323-EX-0607, P-323-EX-0708.

2) Sample collection began at 09:30 and concluded at 09:42. Sample P-323-EX-03.504 associated with FD-31.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-324-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	23	0-2					S-1A (23"): Brown, fine to medium SAND, some Clay, trace Silt. Dry.	
2							CLAYEY SAND / 2.0		
3	S-2	23	2-4					S-2A (23"): Brown, fine to medium SAND, trace Silt. Dry.	
4									
5	S-3	20	4-6					S-3A (20"): Tan, fine to medium SAND, trace Silt. Dry.	
6							SAND		
7	S-4	24	6-8					S-4A (24"): Tan, fine to medium SAND, trace Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-324-EX-0000.5, P-324-EX-00.501, P-324-EX-0101.5, P-324-EX-01.502, P-324-EX-0202.5, P-324-EX-02.5-03, P-324-EX-0303.5, P-324-EX-03.504, P-324-EX-0404.5, P-324-EX-04.505, P-324-EX-0506, P-324-EX-0607, P-324-EX-0708.

2) Sample collection began at 09:50 and concluded at 10:02.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

nobis

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-325-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	20	0-2				CLAYEY SAND / 2.0	S-1A (20"): Tan, fine SAND, some Clay. Dry.	
2									
3	S-2	23	2-4				GRAVELLY SAND / 4.0	S-2A (23"): Tan, fine to coarse SAND, some fine Gravel. Dry.	
4									
5	S-3	23	4-6				SILTY SAND / 8.0	S-3A (23"): Tan, fine to coarse SAND, some Silt. Dry.	
6									
7	S-4	23	6-8					S-4A (23"): Tan, fine to medium SAND, some Silt. Dry.	
8									
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-325-EX-0000.5, P-325-EX-00.501, P-325-EX-0101.5, P-325-EX-01.502, P-325-EX-0202.5, P-325-EX-02.5-03, P-325-EX-0303.5, P-325-EX-03.504, P-325-EX-0404.5, P-325-EX-04.505, P-325-EX-0506, P-325-EX-0607, P-325-EX-0708.

2) Sample collection began at 10:10 and concluded at 10:22.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-326-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	23	0-2					S-1A (23"): Orange brown, fine to medium SAND, some Silt. Dry.	
2									
3	S-2	23	2-4				SILTY SAND	S-2A (23"): Tan, fine to medium SAND, some Silt. Dry.	
4							/ 4.0		
5	S-3	23	4-6					S-3A (23"): Tan, fine to medium SAND, some fine Gravel. Dry.	
6									
7	S-4	24	6-8				GRAVELLY SAND	S-4A (24"): Tan, fine to medium SAND, some fine Gravel. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-326-EX-0000.5, P-326-EX-00.501, P-326-EX-0101.5, P-326-EX-01.502, P-326-EX-0202.5, P-326-EX-02.5-03, P-326-EX-0303.5, P-326-EX-03.504, P-326-EX-0404.5, P-326-EX-04.505, P-326-EX-0506, P-326-EX-0607, P-326-EX-0708.

2) Sample P-326-EX-04.505 associated with FD-33 and sample P-326-EX-0607 associated with FD-32.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

nobis

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-327-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1	S-1	15	0-2					S-1A (15"): Gray, fine SAND. Dry.	
2							SAND / 2.0		
3	S-2	16	2-4					S-2A (16"): Gray, fine to medium SAND, some Silt. Dry.	
4									
5	S-3	22	4-6				SILTY SAND	S-3A (22"): Gray, fine to medium SAND, some Silt. Dry.	
6									
7	S-4	24	6-8					S-4A (24"): Gray, fine to medium SAND, some Silt. Dry.	
8							/ 8.0		
9								Boring terminated at 8 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-327-EX-0000.5, P-327-EX-00.501, P-327-EX-0101.5, P-327-EX-01.502, P-327-EX-0202.5, P-327-EX-02.5-03, P-327-EX-0303.5, P-327-EX-03.504, P-327-EX-0404.5, P-327-EX-04.505, P-327-EX-0506, P-327-EX-0607, P-327-EX-0708.

2) Sample collection began at 10:45 and concluded at 10:57.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

BORING LOG

Project: St. Johnsbury Armory

Location: St. Johnsbury, VT

Nobis Project No.: S00001.017

Boring No.: **P-328-Ex**

Boring Location:

Checked by:

Date Start: November 2, 2023

Date Finish: November 2, 2023

Contractor: Drilex Environmental, Inc.

Driller: D. Steinhart

Nobis Rep.: B. Fortier

Rig Type / Model: Geoprobe Handheld Large Bore Sampler

Hammer Type: N/A

Hammer Hoist: N/A

Ground Surface Elev.:

Datum:

	Drilling Method	Sampler
Type	N/A	Macro-Core Liners
Size ID (in.)	N/A	1x24
Advancement	Direct Push	N/A

Groundwater Observations

Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time

Depth (ft.)	SAMPLE INFORMATION Type & No.	Rec (in.)	Depth (ft.)	Blows/ 6 in.	Ground Water	LITHOLOGY Graphic	Stratum Elev. / Depth (ft.)	SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
1								6 foot void underneath the steps.	
2									
3									
4									
5									
6									
7	S-1	14	6-8					S-1A (14"): Tan, fine to coarse SAND, some Silt. Dry.	
8									
9	S-2	24	8-10					S-2A (24"): Tan, fine to coarse SAND, some Silt. Dry.	
10							SILTY SAND		
11	S-3	24	10-12					S-3A (24"): Tan, fine to coarse SAND, some Silt. Dry.	
12							/ 12.0		
13								Boring terminated at 12 feet.	

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:

1) P-328-EX-0607, P-328-EX-06.507, P-328-EX-0707.5, P-328-EX-07.508, P-328-EX-0808.5, P-328-EX-08.509, P-328-EX-0909.5, P-328-EX-09.510, P-328-EX-1010.5, P-328-EX-10.511, P-328-EX-1112.

2) Sample collection began at 10:58 and concluded at 11:08. Sample P-328-EX-09.510 associated with FD-34.

Soil descriptions, and lithology, are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between stratums; transitions may be gradual.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 1/9/24 14:48 - J:\S00001.000-START 2022 CONTRACT - TO 01 - TBAS\S00001.017_ST JOHNSBURY ARMORY\TECHNICAL DATA\GINT\ST. JOHNSBURY ARMORY.GPJ

APPENDIX D

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3248
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-001-R03E, P-002-R03S, P-003-R03W, P-004-R03C, P-005-R03WT, P-006-R03D, P-007-R04E, P-008-R04S, P-009-R04W, P-010-R04WT, P-011-R04D, P-012-RO5E, P-013-R05S, P-014-R05W, P-015-R05C, P-016-R05F, P-017-R05WT, P-018-R06E, P-019-R06S, P-020-R06C
3/Field Duplicate Pairs: P-018-R06E / P-FD-01 (located in SDG 23H3268), P-003-R03W / P-FD-12 (located in SDG 23H3270), P-009-R04W / P-FD-13 (located in SDG 23H3270)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in all samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3248-01	23H3248-02	23H3248-03	23H3248-04	23H3248-05
Field Sample ID		P-001-R03E	P-002-R03S	P-003-R03W	P-004-R03C	P-005-R03WT
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1221	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1232	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1242	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1248	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1254	mg/kg	37	46	43	29	58
Aroclor 1260	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1262	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U
Aroclor 1268	mg/kg	3.9 U	4.8 U	4.2 U	3.8 U	4.8 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3248-06	23H3248-07	23H3248-08	23H3248-09	23H3248-10
Field Sample ID		P-006-R03D	P-007-R04E	P-008-R04S	P-009-R04W	P-010-R04WT
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1221	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1232	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1242	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1248	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1254	mg/kg	41	23	17	24	51
Aroclor 1260	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1262	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U
Aroclor 1268	mg/kg	5 U	4.9 U	4.3 U	4.4 U	4.7 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3248-11	23H3248-12	23H3248-13	23H3248-14	23H3248-15
Field Sample ID		P-011-R04D	P-012-RO5E	P-013-R05S	P-014-R05W	P-015-R05C
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1221	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1232	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1242	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1248	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1254	mg/kg	50	18	31	22	16
Aroclor 1260	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1262	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U
Aroclor 1268	mg/kg	4.7 U	4.7 U	4.7 U	5 U	4.2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3248-16	23H3248-17	23H3248-18	23H3248-19	23H3248-20
Field Sample ID		P-016-R05F	P-017-R05WT	P-018-R06E	P-019-R06S	P-020-R06C
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1221	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1232	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1242	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1248	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1254	mg/kg	21	35	23	21	18
Aroclor 1260	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1262	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U
Aroclor 1268	mg/kg	4.7 U	4.6 U	4.7 U	4.6 U	4.9 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3248

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/27/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3248
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including three field duplicate samples, were listed on the COC for SDG 23H3248. The samples were collected on 08/14/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-001-R03E	23H3248-01	PCBs
P-002-R03S	23H3248-02	PCBs
P-003-R03W	23H3248-03	PCBs
P-004-R03C	23H3248-04	PCBs
P-005-R03WT	23H3248-05	PCBs
P-006-R03D	23H3248-06	PCBs
P-007-R04E	23H3248-07	PCBs
P-008-R04S	23H3248-08	PCBs
P-009-R04W	23H3248-09	PCBs
P-010-R04WT	23H3248-10	PCBs
P-011-R04D	23H3248-11	PCBs
P-012-RO5E	23H3248-12	PCBs
P-013-R05S	23H3248-13	PCBs
P-014-R05W	23H3248-14	PCBs
P-015-R05C	23H3248-15	PCBs
P-016-R05F	23H3248-16	PCBs
P-017-R05WT	23H3248-17	PCBs
P-018-R06E	23H3248-18	PCBs
P-019-R06S	23H3248-19	PCBs
P-020-R06C	23H3248-20	PCBs

A complete laboratory report was received for SDG 23H3248.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No action is required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-019-R06S (23H3248-19).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses, on both columns. RPDs were ≤ 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) present in the parent sample. No action is taken.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-018-R06E / P-FD-01 (23H3248-18 / 23H3268-15)
- P-003-R03W / P-FD-12 (23H3248-03 / 23H3270-06)
- P-009-R04W / P-FD-13 (23H3248-09 / 23H3270-07)

PCBs: Aroclor results met field duplicate precision criteria and no actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for all samples. All samples required a 1/10 dilution due to the presence of individual Aroclor(s) in the samples. The QLs were greater than 1 mg/kg in all samples due to the required sample dilutions.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3248 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-018-R06E**		**P-FD-01**				
	23H3248-18		**23H3268-15**				
Aroclor 1016	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1221	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1232	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1242	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1248	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1254	23		21		-9.09	-2.00	Ok - abs diff < 4x RL
Aroclor 1260	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1262	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1268	4.7	U	3.8	U	-21.18		Ok - both ND

Note that P-FD-01 is located in SDG 23H3268.

Field Duplicate Evaluation

SDG: 23H3248 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-003-R03W**		**P-FD-12**				
	23H3248-03		**23H3270-06**				
Aroclor 1016	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1221	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1232	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1242	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1248	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1254	43		41		-4.76		Ok - RPD < 50%
Aroclor 1260	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1262	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1268	4.2	U	4.1	U	-2.41		Ok - both ND

Note that P-FD-12 is located in SDG 23H3270.

Field Duplicate Evaluation

SDG: 23H3248 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-009-R04W**		**P-FD-13**				
	23H3248-09		**23H3270-07**				
Aroclor 1016	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1221	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1232	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1242	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1248	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1254	24		23		-4.26		Ok - RPD < 50%
Aroclor 1260	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1262	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1268	4.4	U	4.7	U	6.59		Ok - both ND

Note that P-FD-13 is located in SDG 23H3270.

23H3248 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-001-R03E	8/14/2023	9:20	GRAB	O	U		1				x
2	P-002-R03S	8/14/2023	9:21	GRAB	O	U		1				x
3	P-003-R03W	8/14/2023	9:22	GRAB	O	U		1				x
4	P-004-R03C	8/14/2023	9:23	GRAB	O	U		1				x
5	P-005-R03WT	8/14/2023	9:24	GRAB	O	U		1				x
6	P-006-R03D	8/14/2023	9:25	GRAB	O	U		1				x
7	P-007-R04E	8/14/2023	9:30	GRAB	O	U		1				x
8	P-008-R04S	8/14/2023	9:31	GRAB	O	U		1				x
9	P-009-R04W	8/14/2023	9:32	GRAB	O	U		1				x
10	P-010-R04WT	8/14/2023	9:33	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23	1358
Received by: (signature)	Date/Time: 8/22/23	1258
Relinquished by: (signature)	Date/Time: 8/20/23	1744
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/21/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time:	1746
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3248 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-011-R04D	8/14/2023	9:34	GRAB	O	U		1				x
12	P-012-R05E	8/14/2023	9:50	GRAB	O	U		1				x
13	P-013-R05S	8/14/2023	9:51	GRAB	O	U		1				x
14	P-014-R05W	8/14/2023	9:52	GRAB	O	U		1				x
15	P-015-R05C	8/14/2023	9:53	GRAB	O	U		1				x
16	P-016-R05F	8/14/2023	9:54	GRAB	O	U		1				x
17	P-017-R05WT	8/14/2023	9:55	GRAB	O	U		1				x
18	P-018-R06E	8/14/2023	10:15	GRAB	O	U		1				x
19	P-019-R06S	8/14/2023	10:16	GRAB	O	U		3				x
20	P-020-R06C	8/14/2023	10:17	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1058	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1258	
Relinquished by: (signature)	Date/Time: 8/22/23 1745	
Received by: (signature) 7.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 17 46	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3250
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-021-R06WT, P-022-R06D, P-023-R06F, P-024-R05D, P-025-R07E, P-026-R07S, P-027-R07C, P-028-R07F, P-029-R07WT, P-030-R09E, P-031-R09S, P-032-R09S, P-033-R08C, P-034-R08F, P-035-R08WT, P-036-R08D, P-037-R07D, P-038-R09E, P-039-R09S, P-040-R09W
1/Field Duplicate Pair: P-040-R09W / P-FD-02 (located in SDG 23H3268)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in all samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3250-01	23H3250-02	23H3250-03	23H3250-04	23H3250-05
Field Sample ID		P-021-R06WT	P-022-R06D	P-023-R06F	P-024-R05D	P-025-R07E
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1221	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1232	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1242	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1248	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1254	mg/kg	38	49	52	72	22
Aroclor 1260	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1262	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U
Aroclor 1268	mg/kg	4.7 U	3.7 U	4.8 U	4.9 U	4.9 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3250-06	23H3250-07	23H3250-08	23H3250-09	23H3250-10
Field Sample ID		P-026-R07S	P-027-R07C	P-028-R07F	P-029-R07WT	P-030-R09E
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1221	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1232	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1242	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1248	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1254	mg/kg	14	33	36	35	20
Aroclor 1260	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1262	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U
Aroclor 1268	mg/kg	4.5 U	4.6 U	4.1 U	4.4 U	4.8 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3250-11	23H3250-12	23H3250-13	23H3250-14	23H3250-15
Field Sample ID		P-031-R09S	P-032-R09S	P-033-R08C	P-034-R08F	P-035-R08WT
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1221	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1232	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1242	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1248	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1254	mg/kg	16	11	20	51	34
Aroclor 1260	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1262	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U
Aroclor 1268	mg/kg	3.7 U	4.3 U	4.2 U	4.9 U	4.9 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3250-16	23H3250-17	23H3250-18	23H3250-19	23H3250-20
Field Sample ID		P-036-R08D	P-037-R07D	P-038-R09E	P-039-R09S	P-040-R09W
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1221	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1232	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1242	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1248	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1254	mg/kg	45	19	50	17	16
Aroclor 1260	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1262	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U
Aroclor 1268	mg/kg	4.9 U	4.8 U	4.9 U	4.8 U	4.4 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3250

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/27/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3250
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including one field duplicate sample, were listed on the COC for SDG 23H3250. The samples were collected on 08/14/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-021-R06WT	23H3250-01	PCBs
P-022-R06D	23H3250-02	PCBs
P-023-R06F	23H3250-03	PCBs
P-024-R05D	23H3250-04	PCBs
P-025-R07E	23H3250-05	PCBs
P-026-R07S	23H3250-06	PCBs
P-027-R07C	23H3250-07	PCBs
P-028-R07F	23H3250-08	PCBs
P-029-R07WT	23H3250-09	PCBs
P-030-R09E	23H3250-10	PCBs
P-031-R09S	23H3250-11	PCBs
P-032-R09S	23H3250-12	PCBs
P-033-R08C	23H3250-13	PCBs
P-034-R08F	23H3250-14	PCBs
P-035-R08WT	23H3250-15	PCBs
P-036-R08D	23H3250-16	PCBs
P-037-R07D	23H3250-17	PCBs
P-038-R09E	23H3250-18	PCBs
P-039-R09S	23H3250-19	PCBs
P-040-R09W	23H3250-20	PCBs

A complete laboratory report was received for SDG 23H3250.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

   Not assessed for S2AVM.

4. **Lab and Field Blanks**

   PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

   An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

   Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

   PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No action is required.

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

   If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
   If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

   MS/MSD analyses were not assigned for the samples of this SDG. No action is required.

9. **Laboratory Duplicates**

   PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

    PCBs: Not applicable to this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    The following field duplicate pair is associated with the samples of this SDG.

    - P-040-R09W / P-FD-02 (23H3250-20 / 23H3268-16)

PCBs: Aroclor results met field duplicate precision criteria and no actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for all samples. All samples required a 1/10 dilution due to the presence of individual Aroclor(s) in the samples. The QLs were greater than 1 mg/kg in all samples due to the required sample dilutions.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3250 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-040-R09W**		**P-FD-02**				
	23H3250-20		**23H3268-16**				
Aroclor 1016	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1221	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1232	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1242	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1248	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1254	16		19		17.14	3.00	Ok - abs diff < 4x QL
Aroclor 1260	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1262	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1268	4.4	U	3.7	U	-17.28		Ok - both ND

Note that P-FD-02 is located in SDG 23H3268.

23H3250 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-021-R06WT	8/14/2023	10:18	GRAB	O	U		1				x
2	P-022-R06D	8/14/2023	10:19	GRAB	O	U		1				x
3	P-023-R06F	8/14/2023	10:20	GRAB	O	U		1				x
4	P-024-R05D	8/14/2023	10:30	GRAB	O	U		1				x
5	P-025-R07E	8/14/2023	11:00	GRAB	O	U		1				x
6	P-026-R07S	8/14/2023	11:01	GRAB	O	U		1				x
7	P-027-R07C	8/14/2023	11:02	GRAB	O	U		1				x
8	P-028-R07F	8/14/2023	11:03	GRAB	O	U		1				x
9	P-029-R07WT	8/14/2023	11:04	GRAB	O	U		1				x
10	P-030-R09E	8/14/2023	11:15	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 12:58
Received by: (signature)	Date/Time: 8/22/23 1258
Relinquished by: (signature)	Date/Time: 8/22/23 1741
Received by: (signature) 3.8 22, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

23H3250 RF

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-031-R09S	8/14/2023	11:16	GRAB	O	U		1				x
12	P-032-R09W	8/14/2023	11:17	GRAB	O	U		1				x
13	P-033-R08C	8/14/2023	11:18	GRAB	O	U		1				x
14	P-034-R08F	8/14/2023	11:19	GRAB	O	U		1				x
15	P-035-R08WT	8/14/2023	11:20	GRAB	O	U		1				x
16	P-036-R08D	8/14/2023	11:21	GRAB	O	U		1				x
17	P-037-R07D	8/14/2023	11:30	GRAB	O	U		1				x
18	P-038-R09E	8/14/2023	11:31	GRAB	O	U		1				x
19	P-039-R09S	8/14/2023	11:32	GRAB	O	U		1				x
20	P-040-R09W	8/14/2023	11:33	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	8/22/23 1258
Received by: (signature)	Date/Time:	8/22/23 1258
Relinquished by: (signature)	Date/Time:	8/22/23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time:	8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time:	8/22/23 1746
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3253
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-041-R09C, P-042-R09F, P-043-R09WT, P-044-R09D, P-045-R10E, P-046-R10S, P-047-R10W, P-048-R18E, P-049-R18S, P-050-R18NB, P-051-R18NC, P-052-R18C, P-053-R20E, P-054-R20W, P-055-R20NB, P-056-R20NC, P-057-R21EC, P-058-R21EB, P-059-R21S, P-060-R21C

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in all samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3253-01	23H3253-02	23H3253-03	23H3253-04	23H3253-05
Field Sample ID		P-041-R09C	P-042-R09F	P-043-R09WT	P-044-R09D	P-045-R10E
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1221	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1232	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1242	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1248	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1254	mg/kg	14	56	27	31	13
Aroclor 1260	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1262	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U
Aroclor 1268	mg/kg	2.4 U	5 U	4.9 U	5 U	2.4 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3253-06	23H3253-07	23H3253-08	23H3253-09	23H3253-10
Field Sample ID		P-046-R10S	P-047-R10W	P-048-R18E	P-049-R18S	P-050-R18NB
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1221	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1232	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1242	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1248	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1254	mg/kg	21	19	180	330	110
Aroclor 1260	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1262	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U
Aroclor 1268	mg/kg	4.7 U	4.9 U	9.8 U	24 U	8.8 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3253-11	23H3253-12	23H3253-13	23H3253-14	23H3253-15
Field Sample ID		P-051-R18NC	P-052-R18C	P-053-R20E	P-054-R20W	P-055-R20NB
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1221	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1232	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1242	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1248	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1254	mg/kg	290	19	4000	5100	1300
Aroclor 1260	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1262	mg/kg	24 U	4.3 U	250 U	250 U	90 U
Aroclor 1268	mg/kg	24 U	4.3 U	250 U	250 U	90 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3253-16	23H3253-17	23H3253-18	23H3253-19	23H3253-20
Field Sample ID		P-056-R20NC	P-057-R21EC	P-058-R21EB	P-059-R21S	P-060-R21C
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1221	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1232	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1242	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1248	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1254	mg/kg	6400	86	52	380	50
Aroclor 1260	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1262	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U
Aroclor 1268	mg/kg	480 U	8.8 U	4.4 U	47 U	4.6 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3253

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/27/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3253
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples were listed on the COC for SDG 23H3253. The samples were collected on 08/14/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-041-R09C	23H3253-01	PCBs
P-042-R09F	23H3253-02	PCBs
P-043-R09WT	23H3253-03	PCBs
P-044-R09D	23H3253-04	PCBs
P-045-R10E	23H3253-05	PCBs
P-046-R10S	23H3253-06	PCBs
P-047-R10W	23H3253-07	PCBs
P-048-R18E	23H3253-08	PCBs
P-049-R18S	23H3253-09	PCBs
P-050-R18NB	23H3253-10	PCBs
P-051-R18NC	23H3253-11	PCBs
P-052-R18C	23H3253-12	PCBs
P-053-R20E	23H3253-13	PCBs
P-054-R20W	23H3253-14	PCBs
P-055-R20NB	23H3253-15	PCBs
P-056-R20NC	23H3253-16	PCBs
P-057-R21EC	23H3253-17	PCBs
P-058-R21EB	23H3253-18	PCBs
P-059-R21S	23H3253-19	PCBs
P-060-R21C	23H3253-20	PCBs

A complete laboratory report was received for SDG 23H3253.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/5 to 1/1000. Surrogates were diluted out of samples that had sample dilutions > 1/20. No action is required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-043-R09WT (23H3253-03).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses, on both columns. RPDs were ≤ 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) present in the parent sample. No action is taken.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for all samples. All samples required dilutions due to the presence of individual Aroclor(s) in the samples. Dilutions ranged from 1/5 through 1/1,000. The QLs were > 1 mg/kg in all samples due to the required sample dilutions.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23H3253 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-041-R09C	8/14/2023	11:34	GRAB	O	U		1				x
2	P-042-R09F	8/14/2023	11:35	GRAB	O	U		1				x
3	P-043-R09WT	8/14/2023	11:36	GRAB	O	U		3				x
4	P-044-R09D	8/14/2023	11:37	GRAB	O	U		1				x
5	P-045-R10E	8/14/2023	12:00	GRAB	O	U		1				x
6	P-046-R10S	8/14/2023	12:01	GRAB	O	U		1				x
7	P-047-R10W	8/14/2023	12:02	GRAB	O	U		1				x
8	P-048-R18E	8/14/2023	12:10	GRAB	O	U		1				x
9	P-049-R18S	8/14/2023	12:11	GRAB	O	U		1				x
10	P-050-R18NB	8/14/2023	12:12	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 1258 8/14/23
Received by: (signature)	Date/Time: 8/22/23 1255
Relinquished by: (signature)	Date/Time: 8/22/23 1740
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3253 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Engineering, INC
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

O Field Filtered
O Lab to Filter

Orthophosphate Samples

O Field Filtered
O Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-051-R18NC	8/14/2023	12:13	GRAB	O	U		1				x
12	P-052-R18C	8/14/2023	12:14	GRAB	O	U		1				x
13	P-053-R20E	8/14/2023	12:15	GRAB	O	U		1				x
14	P-054-R20W	8/14/2023	12:16	GRAB	O	U		1				x
15	P-055-R20NB	8/14/2023	12:17	GRAB	O	U		1				x
16	P-056-R20NC	8/14/2023	12:18	GRAB	O	U		1				x
17	P-057-R21EC	8/14/2023	12:30	GRAB	O	U		1				x
18	P-058-R21EB	8/14/2023	12:31	GRAB	O	U		1				x
19	P-059-R21S	8/14/2023	12:32	GRAB	O	U		1				x
20	P-060-R21C	8/14/2023	12:33	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1258
Received by: (signature)	Date/Time: 8/22/23 1258
Relinquished by: (signature)	Date/Time: 8-22-23 1740
Received by: (signature) 38, 22, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1740
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3255
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-061-R21D, P-062-S01S, P-063-S01W, P-064-S01N, P-065-S01C, P-066-S01C, P-067-S01D, P-068-R22EDW, P-069-R22EC, P-070-R22WPW, P-071-R22WB, P-072-R2D, P-073-R22C, P-074-R23EC, P-075-R23EB, P-076-R23EWT, P-077-R23W, P-078-R23N, P-079-R23D, P-080-R22SPW
1/Field Duplicate Pair: P-065-S01C / P-FD-03 (located in SDG 23H3268)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in all samples except for sample P-066-S01C, due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to field duplicate imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3255-01	23H3255-02	23H3255-03	23H3255-04	23H3255-05
Field Sample ID		P-061-R21D	P-062-S01S	P-063-S01W	P-064-S01N	P-065-S01C
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4 U	2 U	2 U	4 U	4 U
Aroclor 1221	mg/kg	4 U	2 U	2 U	4 U	4 U
Aroclor 1232	mg/kg	4 U	2 U	2 U	4 U	4 U
Aroclor 1242	mg/kg	4 U	2 U	2 U	4 U	4 U
Aroclor 1248	mg/kg	4 U	2 U	2 U	4 U	4 UJ
Aroclor 1254	mg/kg	52	18	40	43	81 J
Aroclor 1260	mg/kg	4 U	2 U	2 U	4 U	4 U
Aroclor 1262	mg/kg	4 U	2 U	2 U	4 U	4 U
Aroclor 1268	mg/kg	4 U	2 U	2 U	4 U	4 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3255-06	23H3255-07	23H3255-08	23H3255-09	23H3255-10
Field Sample ID		P-066-S01C	P-067-S01D	P-068-R22EDW	P-069-R22EC	P-070-R22WPW
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	0.2 U	4 U	4 U	40 U	2 U
Aroclor 1221	mg/kg	0.2 U	4 U	4 U	40 U	2 U
Aroclor 1232	mg/kg	0.2 U	4 U	4 U	40 U	2 U
Aroclor 1242	mg/kg	0.2 U	4 U	4 U	40 U	2 U
Aroclor 1248	mg/kg	0.2 UJ	4 U	4 U	40 U	2 U
Aroclor 1254	mg/kg	0.33 J	65	52	460	21
Aroclor 1260	mg/kg	0.2 U	4 U	4 U	40 U	2 U
Aroclor 1262	mg/kg	0.2 U	4 U	4 U	40 U	2 U
Aroclor 1268	mg/kg	0.2 U	4 U	4 U	40 U	2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3255-11	23H3255-12	23H3255-13	23H3255-14	23H3255-15
Field Sample ID		P-071-R22WB	P-072-R2D	P-073-R22C	P-074-R23EC	P-075-R23EB
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1221	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1232	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1242	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1248	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1254	mg/kg	280	200	67	150	65
Aroclor 1260	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1262	mg/kg	20 U	20 U	4 U	10 U	4 U
Aroclor 1268	mg/kg	20 U	20 U	4 U	10 U	4 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3255-16	23H3255-17	23H3255-18	23H3255-19	23H3255-20
Field Sample ID		P-076-R23EWT	P-077-R23W	P-078-R23N	P-079-R23D	P-080-R22SPW
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1221	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1232	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1242	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1248	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1254	mg/kg	92	120	150	75	25
Aroclor 1260	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1262	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U
Aroclor 1268	mg/kg	10 U	9.9 U	10 U	9.8 U	2 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3255

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclors 1248 and 1254	P-065-S01C, P-066-S01C	Field duplicate imprecision	J / UJ	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/27/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3255
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including one field duplicate sample, were listed on the COC for SDG 23H3255. The samples were collected on 08/14/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-061-R21D	23H3255-01	PCBs
P-062-S01S	23H3255-02	PCBs
P-063-S01W	23H3255-03	PCBs
P-064-S01N	23H3255-04	PCBs
P-065-S01C	23H3255-05	PCBs
P-066-S01C	23H3255-06	PCBs
P-067-S01D	23H3255-07	PCBs
P-068-R22EDW	23H3255-08	PCBs
P-069-R22EC	23H3255-09	PCBs
P-070-R22WPW	23H3255-10	PCBs
P-071-R22WB	23H3255-11	PCBs
P-072-R2D	23H3255-12	PCBs
P-073-R22C	23H3255-13	PCBs
P-074-R23EC	23H3255-14	PCBs
P-075-R23EB	23H3255-15	PCBs
P-076-R23EWT	23H3255-16	PCBs
P-077-R23W	23H3255-17	PCBs
P-078-R23N	23H3255-18	PCBs
P-079-R23D	23H3255-19	PCBs
P-080-R22SPW	23H3255-20	PCBs

A complete laboratory report was received for SDG 23H3255.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/10 to 1/200. Surrogates were diluted out of samples that had sample dilutions > 1/20. No action is required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-069-R22EC (23H3255-09).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses, on both columns. RPDs were ≤ 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) present in the parent sample. No action is taken.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-065-S01C / P-FD-03 (23H3255-05 / 23H3268-17)

PCBs: Aroclor results met field duplicate precision criteria except for results for Aroclor 1248, where the absolute difference was > 4x QL for results < 5x QL for Aroclor 1248, and for results for Aroclor 1254, where the RPD was > 50% for results > 5x QL. Based on the EPA Region I Supplemental Data Review Guidance (Region I Supplement, 2020), detected and non-detect results for Aroclor 1248 and Aroclor 1254 are qualified as estimated (J/UJ) in samples P-065-S01C (23H3255-05) and P-066-S01C (23H3255-06) due to field duplicate imprecision. Professional judgement based on the EPA Region I Supplement (2020) was used to qualify only the similar matrix/location "S01C" samples. Detected results for Aroclors 1248 and 1254 are also qualified as estimated in sample P-FD-03 (located in SDG 23H3268).

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for all samples except sample P-066-S01C, where a dilution was not required. All remaining samples required dilutions due to the presence of individual Aroclors(s) in the samples. The QLs were > 1 mg/kg in all samples requiring dilutions. Dilutions ranged from 1/10 to 1/200.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3255 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment[1]
Sample ID	**P-065-S01C**		**P-FD-03**				
	23H3255-05		**23H3268-17**				
Aroclor 1016	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1221	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1232	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1242	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1248	4	U	68		177.78	64	**J/UJ - abs diff > 4x RL**
Aroclor 1254	81		44		-59.20		**J/UJ - RPD > 50%**
Aroclor 1260	4	U	4.8	U	18.18		Ok - both ND
Aroclor 1262	4	U	4.8	U	18.18		Ok - both ND
Aroclor 1268	4	U	4.8	U	18.18		Ok - both ND

[1] Professional judgement used to qualify "S01C" samples only (P-065-S01C and P-066-S01C).
Note that P-FD-03 is located in SDG 23H3268.

23H3255 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time			
7-Day	☑	10-Day	☐
PFAS 10-Day (std)	☐	Due Date:	

Rush-Approval Required			
1-Day	☐	3-Day	☐
2-Day	☐	4-Day	☐

Data Delivery	
Format:	PDF ☑ EXCEL ☑
Other:	Equis EDD
CLP Like Data Pkg Required:	☐
Email To:	tandrews@nobis-group.com
Fax To #:	

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

PCB ONLY

SOXHLET ☑

NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-061-R21D	8/14/2023	12:34	GRAB	O	U		1				x
2	P-062-S01S	8/14/2023	12:55	GRAB	O	U		1				x
3	P-063-S01W	8/14/2023	12:56	GRAB	O	U		1				x
4	P-064-S01N	8/14/2023	12:57	GRAB	O	U		1				x
5	P-065-S01R	8/14/2023	13:00	GRAB	O	U		1				x
6	P-066-S01C	8/14/2023	13:01	GRAB	O	U		1				x
7	P-067-S01D	8/14/2023	13:02	GRAB	O	U		1				x
8	P-068-R22EDW	8/14/2023	13:30	GRAB	O	U		1				x
9	P-069-R22EC	8/14/2023	13:31	GRAB	O	U		3				x
10	P-070-R22WPW	8/14/2023	13:32	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 1258 8/22/23
Received by: (signature)	Date/Time: 1258 8/22/23
Relinquished by: (signature)	Date/Time: 1746 8.22.23
Received by: (signature) 38, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements	
MA	
CT	
Other:	

Special Requirements	
☐	MA MCP Required
	MCP Certification Form Required
☐	CT RCP Required
	RCP Certification Form Required
☐	MA State DW Required
PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3255 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-071-R22WB	8/14/2023	13:33	GRAB	O	U		1				x
12	P-072-R2D	8/14/2023	13:34	GRAB	O	U		1				x
13	P-073-R22C	8/14/2023	13:35	GRAB	O	U		1				x
14	P-074-R23EC	8/14/2023	13:40	GRAB	O	U		1				x
15	P-075-R23EB	8/14/2023	13:41	GRAB	O	U		1				x
16	P-076-R23EWT	8/14/2023	13:42	GRAB	O	U		1				x
17	P-077-R23W	8/14/2023	13:43	GRAB	O	U		1				x
18	P-078-R23N	8/14/2023	13:44	GRAB	O	U		1				x
19	P-079-R23D	8/14/2023	13:45	GRAB	O	U		1				x
20	P-080-R22SPW	8/14/2023	13:50	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1355	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1355	
Relinquished by: (signature)	Date/Time: 8/22/23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3256
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-081-R22SB, P-082-R24E, P-083-R24SC, P-084-R24SB, P-085-R24W, P-086-R25E, P-087-R25S, P-088-R2SCDW, P-089-R2SCP, P-090-R25AE, P-091-R25AS, P-092-R25ACDW, P-093-R25ACP, P-094-R21W, P-095-R21FN, P-096-R21FS, P-097-R24AS, P-098-R24AW, P-099-R24AN, P-100-R24AC

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in all samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3256-01	23H3256-02	23H3256-03	23H3256-04	23H3256-05
Field Sample ID		P-081-R22SB	P-082-R24E	P-083-R24SC	P-084-R24SB	P-085-R24W
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1221	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1232	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1242	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1248	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1254	mg/kg	400	120	130	130	110
Aroclor 1260	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1262	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U
Aroclor 1268	mg/kg	20 U	9.8 U	9.9 U	10 U	9.9 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3256-06RE1	23H3256-07	23H3256-08RE1	23H3256-09RE1	23H3256-10RE1
Field Sample ID		P-086-R25E	P-087-R25S	P-088-R2SCDW	P-089-R2SCP	P-090-R25AE
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1221	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1232	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1242	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1248	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1254	mg/kg	300	90	66	56	350
Aroclor 1260	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1262	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U
Aroclor 1268	mg/kg	23 U	10 U	7.5 U	4.3 U	20 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3256-11	23H3256-12RE1	23H3256-13RE1	23H3256-14RE1	23H3256-15
Field Sample ID		P-091-R25AS	P-092-R25ACDW	P-093-R25ACP	P-094-R21W	P-095-R21FN
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1221	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1232	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1242	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1248	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1254	mg/kg	380	37	30	51	21
Aroclor 1260	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1262	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U
Aroclor 1268	mg/kg	20 U	4.4 U	3.8 U	3.9 U	2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3256-16	23H3256-17	23H3256-18RE1	23H3256-19	23H3256-20
Field Sample ID		P-096-R21FS	P-097-R24AS	P-098-R24AW	P-099-R24AN	P-100-R24AC
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U
Aroclor 1221	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U
Aroclor 1232	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U
Aroclor 1242	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U
Aroclor 1248	mg/kg	9.9	4.1 U	18 U	9.8 U	10 U
Aroclor 1254	mg/kg	16	42	200	150	110
Aroclor 1260	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U
Aroclor 1262	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U
Aroclor 1268	mg/kg	2 U	4.1 U	18 U	9.8 U	10 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3256

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3256
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples were listed on the COC for SDG 23H3256. The samples were collected on 08/14/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-081-R22SB	23H3256-01	PCBs
P-082-R24E	23H3256-02	PCBs
P-083-R24SC	23H3256-03	PCBs
P-084-R24SB	23H3256-04	PCBs
P-085-R24W	23H3256-05	PCBs
P-086-R25E	23H3256-06RE1	PCBs
P-087-R25S	23H3256-07	PCBs
P-088-R2SCDW	23H3256-08RE1	PCBs
P-089-R2SCP	23H3256-09RE1	PCBs
P-090-R25AE	23H3256-10RE1	PCBs
P-091-R25AS	23H3256-11	PCBs
P-092-R25ACDW	23H3256-12RE1	PCBs
P-093-R25ACP	23H3256-13RE1	PCBs
P-094-R21W	23H3256-14RE1	PCBs
P-095-R21FN	23H3256-15	PCBs
P-096-R21FS	23H3256-16	PCBs
P-097-R24AS	23H3256-17	PCBs
P-098-R24AW	23H3256-18RE1	PCBs
P-099-R24AN	23H3256-19	PCBs
P-100-R24AC	23H3256-20	PCBs

A complete laboratory report was received for SDG 23H3256.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/10 to 1/100. Surrogates were diluted out of samples that had sample dilutions > 1/20. No action is required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pairs associated with the samples met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-081-R22SB (23H3256-01).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses, on both columns. Three of the four RPDs were > 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent sample. No action is taken.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for all samples. All samples required dilutions due to the presence of individual Aroclors(s) in the samples. Dilutions ranged from 1/10 to 1/100. The QLs were greater than 1 mg/kg in the samples due to the required sample dilutions.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23H3256 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-081-R22SB	8/14/2023	13:51	GRAB	O	U		3				x
2	P-082-R24E	8/14/2023	13:55	GRAB	O	U		1				x
3	P-083-R24SC	8/14/2023	13:56	GRAB	O	U		1				x
4	P-084-R24SB	8/14/2023	13:57	GRAB	O	U		1				x
5	P-085-R24W	8/14/2023	13:58	GRAB	O	U		1				x
6	P-086-R25E	8/14/2023	14:35	GRAB	O	U		1				x
7	P-087-R25S	8/14/2023	14:36	GRAB		U		1				x
8	P-088-R2SCDW	8/14/2023	14:37	GRAB	O	U		1				x
9	P-089-R2SCP	8/14/2023	14:38	GRAB	O	U		1				x
10	P-090-R25AE	8/14/2023	14:40	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 1238	
Received by: (signature)	Date/Time: 8/22/23 P55	
Relinquished by: (signature)	Date/Time: 8-22-23 1741	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3256 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-091-R25AS	8/14/2023	14:41	GRAB	O	U		1				x
12	P-092-R25ACDW	8/14/2023	14:42	GRAB	O	U		1				x
13	P-093-R25ACP	8/14/2023	14:43	GRAB	O	U		1				x
14	P-094-R21W	8/14/2023	14:44	GRAB	O	U		1				x
15	P-095-R21FN	8/14/2023	14:45	GRAB	O	U		1				x
16	P-096-R21FS	8/14/2023	14:46	GRAB	O	U		1				x
17	P-097-R24AS	8/14/2023	14:50	GRAB	O	U		1				x
18	P-098-R24AW	8/14/2023	14:51	GRAB	O	U		1				x
19	P-099-R24AN	8/14/2023	14:52	GRAB	O	U		1				x
20	P-100-R24AC	8/14/2023	14:53	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1255	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1358	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23 1746	
Relinquished by: (signature) 1.6, 5.6	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3257
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-101-R26E, P-102-R26SC, P-103-R26SB, P-104-R26N, P-105-R26C, P-106-R-27S, P-107-R27NC, P-108-R27NB, P-109-R27AE, P-110-R27AW, P-111-R28SC, P-112-R28SB, P-113-R28WC, P-114-R28WB, P-115-R28D, P-116-29WC, P-117-29WB, P-118-29NB, P-119-29NC, P-120-R30E
1/Field Duplicate Pair: P-111-R28SC / P-FD-04 (located in SDG 23H3268)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, 2023 and August 15, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in all samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3257-01	23H3257-02	23H3257-03	23H3257-04	23H3257-05
Field Sample ID		P-101-R26E	P-102-R26SC	P-103-R26SB	P-104-R26N	P-105-R26C
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1221	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1232	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1242	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1248	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1254	mg/kg	41	80	36	42	7.9
Aroclor 1260	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1262	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U
Aroclor 1268	mg/kg	4.5 U	4 U	4.3 U	3.6 U	3.5 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3257-06	23H3257-07	23H3257-08	23H3257-09	23H3257-10
Field Sample ID		P-106-R-27S	P-107-R27NC	P-108-R27NB	P-109-R27AE	P-110-R27AW
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1221	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1232	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1242	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1248	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1254	mg/kg	42	30	50	12	23
Aroclor 1260	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1262	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U
Aroclor 1268	mg/kg	5 U	4.8 U	3.6 U	4.5 U	4.4 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3257-11	23H3257-12	23H3257-13	23H3257-14	23H3257-15
Field Sample ID		P-111-R28SC	P-112-R28SB	P-113-R28WC	P-114-R28WB	P-115-R28D
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/14/23
Aroclor 1016	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1221	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1232	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1242	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1248	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1254	mg/kg	19	11	29	16	27
Aroclor 1260	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1262	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U
Aroclor 1268	mg/kg	4.8 U	3.6 U	3.9 U	4.8 U	4.2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3257-16	23H3257-17	23H3257-18	23H3257-19	23H3257-20
Field Sample ID		P-116-29WC	P-117-29WB	P-118-29NB	P-119-29NC	P-120-R30E
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/14/23	08/15/23
Aroclor 1016	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U
Aroclor 1221	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U
Aroclor 1232	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U
Aroclor 1242	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U
Aroclor 1248	mg/kg	4.6 U	4.4 U	43	26	4.4 U
Aroclor 1254	mg/kg	60	17	29	51	170
Aroclor 1260	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U
Aroclor 1262	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U
Aroclor 1268	mg/kg	4.6 U	4.4 U	3.9 U	4.5 U	4.4 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3257

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3257
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including one field duplicate sample, were listed on the COC for SDG 23H3257. The samples were collected on 08/14/2023 and 08/15/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-101-R26E	23H3257-01	PCBs
P-102-R26SC	23H3257-02	PCBs
P-103-R26SB	23H3257-03	PCBs
P-104-R26N	23H3257-04	PCBs
P-105-R26C	23H3257-05	PCBs
P-106-R-27S	23H3257-06	PCBs
P-107-R27NC	23H3257-07	PCBs
P-108-R27NB	23H3257-08	PCBs
P-109-R27AE	23H3257-09	PCBs
P-110-R27AW	23H3257-10	PCBs
P-111-R28SC	23H3257-11	PCBs
P-112-R28SB	23H3257-12	PCBs
P-113-R28WC	23H3257-13	PCBs
P-114-R28WB	23H3257-14	PCBs
P-115-R28D	23H3257-15	PCBs
P-116-29WC	23H3257-16	PCBs
P-117-29WB	23H3257-17	PCBs
P-118-29NB	23H3257-18	PCBs
P-119-29NC	23H3257-19	PCBs
P-120-R30E	23H3257-20	PCBs

A complete laboratory report was received for SDG 23H3257.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

   Not assessed for S2AVM.

4. **Lab and Field Blanks**

   PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

   An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

   Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

   PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No action is required.

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

   If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
   If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

   MS/MSD analyses were performed on sample P-114-R28WB (23H3257-14).

   Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses, on both columns. RPDs also exceeded the ≤ 30% limit specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent sample. No action is taken.

9. **Laboratory Duplicates**

   PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

    PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-111-R28SC / P-FD-04 (23H3257-11 / 23H3268-18)

PCBs: Aroclor results met field duplicate precision criteria. No actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for all samples. All samples required a 1/10 dilution due to the presence of individual Aroclors(s) in the samples. The QLs were > 1 mg/kg in all samples due to the required dilutions.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3257 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-111-R28SC**		**P-FD-04**				
	23H3257-11		**23H3268-18**				
Aroclor 1016	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1221	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1232	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1242	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1248	4.8	U	4.7		-2.11	-0.10	Ok - abs diff < 4x RL
Aroclor 1254	19		5.6		-108.94	-13.40	Ok - abs diff < 4x RL
Aroclor 1260	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1262	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1268	4.8	U	0.38	U	-170.66		Ok - both ND

Note that P-FD-04 is located in SDG 23H3268.

23H3257 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-101-R26E	8/14/2023	15:10	GRAB	O	U		1				x
2	P-102-R26SC	8/14/2023	15:11	GRAB	O	U		1				x
3	P-103-R26SB	8/14/2023	15:12	GRAB	O	U		1				x
4	P-104-R26N	8/14/2023	15:13	GRAB	O	U		1				x
5	P-105-R26C	8/14/2023	15:14	GRAB	O	U		1				x
6	P-106-R-27S	8/14/2023	15:15	GRAB	O	U		1				x
7	P-107-R27NC	8/14/2023	15:16	GRAB	O	U		1				x
8	P-108-R27NB	8/14/2023	15:17	GRAB	O	U		1				x
9	P-109-R27AE	8/14/2023	15:30	GRAB	O	U		1				x
10	P-110-R27AW	8/14/2023	15:31	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 0958	
Received by: (signature)	Date/Time: 8/22/23 1255	
Relinquished by: (signature)	Date/Time: 8.22.23 1744	
Received by: (signature)	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23113257 RF

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-111-R28SC	8/14/2023	15:35	GRAB	O	U		1				x
12	P-112-R28SB	8/14/2023	15:36	GRAB	O	U		1				x
13	P-113-R28WC	8/14/2023	15:37	GRAB	O	U		1				x
14	P-114-R28WB	8/14/2023	15:38	GRAB	O	U		3				x
15	P-115-R28D	8/14/2023	16:30	GRAB	O	U		1				x
16	P-116-29WC	8/14/2023	16:31	GRAB	O	U		1				x
17	P-117-29WB	8/14/2023	16:32	GRAB	O	U		1				x
18	P-118-29NB	8/14/2023	16:33	GRAB	O	U		1				x
19	P-119-29NC	8/14/2023	16:34	GRAB	O	U		1				x
20	P-120-R30E	8/15/2023	8:30	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1255	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1255	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) GM AM 38, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3258
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-121-R30NC, P-122-R30NB, P-123-R30C, P-124-R31W, P-125-R31NC, P-126-R33E, P-127-R33NC, P-128-R34C, P-129-R35W, P-130-R37E, P-131-R37S, P-132-R31NB, P-133-R16EP, P-134-R16EW, P-135-R16WT, P-136-GN, P-137-GFN, P-138-GFE, P-139-GFS, P-140-GFW
3/Field Duplicate Pairs: P-127-R33NC / P-FD-05 (located in SDG 23H3268), P-133-R16EP / P-FD-06 (located in SDG 23H3268), P-131-R37S / P-FD-11 (located in SDG 23H3270)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 15, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3258-01	23H3258-02	23H3258-03	23H3258-04	23H3258-05
Field Sample ID		P-121-R30NC	P-122-R30NB	P-123-R30C	P-124-R31W	P-125-R31NC
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1221	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1232	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1242	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1248	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1254	mg/kg	130	94	31	28	160
Aroclor 1260	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1262	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U
Aroclor 1268	mg/kg	9.5 U	8.8 U	4.4 U	4.7 U	22 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3258-06	23H3258-07	23H3258-08	23H3258-09	23H3258-10
Field Sample ID		P-126-R33E	P-127-R33NC	P-128-R34C	P-129-R35W	P-130-R37E
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1221	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1232	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1242	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1248	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1254	mg/kg	300	310	43	180	400
Aroclor 1260	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1262	mg/kg	23 U	22 U	4.9 U	20 U	20 U
Aroclor 1268	mg/kg	23 U	22 U	4.9 U	20 U	20 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3258-11	23H3258-12	23H3258-13	23H3258-14	23H3258-15
Field Sample ID		P-131-R37S	P-132-R31NB	P-133-R16EP	P-134-R16EW	P-135-R16WT
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1221	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1232	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1242	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1248	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1254	mg/kg	270	250	5.5	21	33
Aroclor 1260	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1262	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U
Aroclor 1268	mg/kg	24 U	22 U	0.46 U	4 U	3.8 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3258-16	23H3258-17	23H3258-18	23H3258-19	23H3258-20
Field Sample ID		P-136-GN	P-137-GFN	P-138-GFE	P-139-GFS	P-140-GFW
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1221	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1232	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1242	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1248	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1254	mg/kg	6.1	3	3.6	7.1	4.1
Aroclor 1260	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1262	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U
Aroclor 1268	mg/kg	0.45 U	0.5 U	0.49 U	0.43 U	0.45 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3258

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3258
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including three field duplicate samples, were listed on the COC for SDG 23H3258. The samples were collected on 08/15/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-121-R30NC	23H3258-01	PCBs
P-122-R30NB	23H3258-02	PCBs
P-123-R30C	23H3258-03	PCBs
P-124-R31W	23H3258-04	PCBs
P-125-R31NC	23H3258-05	PCBs
P-126-R33E	23H3258-06	PCBs
P-127-R33NC	23H3258-07	PCBs
P-128-R34C	23H3258-08	PCBs
P-129-R35W	23H3258-09	PCBs
P-130-R37E	23H3258-10	PCBs
P-131-R37S	23H3258-11	PCBs
P-132-R31NB	23H3258-12	PCBs
P-133-R16EP	23H3258-13	PCBs
P-134-R16EW	23H3258-14	PCBs
P-135-R16WT	23H3258-15	PCBs
P-136-GN	23H3258-16	PCBs
P-137-GFN	23H3258-17	PCBs
P-138-GFE	23H3258-18	PCBs
P-139-GFS	23H3258-19	PCBs
P-140-GFW	23H3258-20	PCBs

A complete laboratory report was received for SDG 23H3258.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/10 to 1/50. Surrogates were diluted out of samples that had sample dilutions > 1/20. No action is required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-136-GN (23H3258-16).

The percent recovery of Aroclor 1016 (147%) exceeded the Program QAPP limits of 40-140% in the MSD analysis on the primary column. RPDs were ≤ 30%, as specified in the Program QAPP, except for the RPD for Aroclor 1260 on the confirmation column (35.4%). Results for Aroclors 1016, 1221, 1232, and 1242 (all reported from the primary column analysis) are non-detect in the parent sample. Based on the NFGs (2020), the non-detect results are accepted unqualified since the potential bias is high. Results for Aroclor 1260 were reported from the primary column and therefore, no actions are taken for the exceeded RPD limit for Aroclor 1260 on the confirmation column. Qualification considerations are limited to the parent sample only due to the nature of the samples (building material).

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. Serial Dilution (metals only)

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-127-R33NC / P-FD-05 (23H3258-07 / 23H3268-19)
- P-133-R16EP / P-FD-06 (23H3258-13 / 23H3268-20)
- P-131-R37S / P-FD-11 (23H3258-11 / 23H3270-05)

PCBs: Aroclor results met field duplicate precision criteria and no actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required dilutions. Dilutions ranged from 1/5 to 1/50. The QLs were greater than 1 mg/kg in samples requiring dilutions ≥ 1/20.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3258 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-127-R33NC**		**P-FD-05**				
	23H3258-07		**23H3268-19**				
Aroclor 1016	22	U	21	U	-4.65		Ok - both ND
Aroclor 1221	22	U	21	U	-4.65		Ok - both ND
Aroclor 1232	22	U	21	U	-4.65		Ok - both ND
Aroclor 1242	22	U	21	U	-4.65		Ok - both ND
Aroclor 1248	22	U	21	U	-4.65		Ok - both ND
Aroclor 1254	310		340		9.23		Ok - RPD < 50%
Aroclor 1260	22	U	21	U	-4.65		Ok - both ND
Aroclor 1262	22	U	21	U	-4.65		Ok - both ND
Aroclor 1268	22	U	21	U	-4.65		Ok - both ND

Note that P-FD-05 is located in SDG 23H3268.

Field Duplicate Evaluation

SDG: 23H3258 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-133-R16EP**		**P-FD-06**				
	23H3258-13		**23H3268-20**				
Aroclor 1016	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1221	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1232	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1242	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1248	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1254	5.5		5.6		1.80		Ok - RPD < 50%
Aroclor 1260	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1262	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1268	0.46	U	0.4	U	-13.95		Ok - both ND

Note that P-FD-06 is located in SDG 23H3268.

Field Duplicate Evaluation

SDG: 23H3258 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-131-R37S**		**P-FD-11**				
	23H3258-11		**23H3270-05**				
Aroclor 1016	24	U	22	U	-8.70		Ok - both ND
Aroclor 1221	24	U	22	U	-8.70		Ok - both ND
Aroclor 1232	24	U	22	U	-8.70		Ok - both ND
Aroclor 1242	24	U	22	U	-8.70		Ok - both ND
Aroclor 1248	24	U	22	U	-8.70		Ok - both ND
Aroclor 1254	270		210		-25.00		Ok - RPD < 50%
Aroclor 1260	24	U	22	U	-8.70		Ok - both ND
Aroclor 1262	24	U	22	U	-8.70		Ok - both ND
Aroclor 1268	24	U	22	U	-8.70		Ok - both ND

Note that P-FD-11 is located in SDG 23H3270.

23H3258 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-121-R30NC	8/15/2023	8:31	GRAB	O	U		1				x
2	P-122-R30NB	8/15/2023	8:32	GRAB	O	U		1				x
3	P-123-R30C	8/15/2023	8:33	GRAB	O	U		1				x
4	P-124-R31W	8/15/2023	8:34	GRAB	O	U		1				x
5	P-125-R31NC	8/15/2023	8:35	GRAB	O	U		1				x
6	P-126-R33E	8/15/2023	8:36	GRAB	O	U		1				x
7	P-127-R33NC	8/15/2023	8:37	GRAB	O	U		1				x
8	P-128-R34C	8/15/2023	8:38	GRAB	O	U		1				x
9	P-129-R35W	8/15/2023	8:39	GRAB	O	U		1				x
10	P-130-R37E	8/15/2023	8:40	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8/22/23 1355	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8/22/23 1355	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3258 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	5t Johnsbury Armory
Project Location:	5t Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-131-R37S	8/15/2023	8:41	GRAB	O	U		1				x
12	P-132-R31NB	8/15/2023	10:00	GRAB	O	U		1				x
13	P-133-R16EP	8/15/2023	12:59	GRAB	O	U		1				x
14	P-134-R16EW	8/15/2023	13:00	GRAB	O	U		1				x
15	P-135-R16WT	8/15/2023	13:01	GRAB	O	U		1				x
16	P-136-GN	8/15/2023	13:15	GRAB	O	U		3				x
17	P-137-GFN	8/15/2023	13:16	GRAB	O	U		1				x
18	P-138-GFE	8/15/2023	13:17	GRAB	O	U		1				x
19	P-139-GFS	8/15/2023	13:18	GRAB	O	U		1				x
20	P-140-GFW	8/15/2023	13:19	GRAB	O	U		1				x

[3] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8/22/23 1256
Received by: (signature)	Date/Time: 8/22/23 1256
Relinquished by: (signature)	Date/Time: 8-22-23 1746
Received by: (signature) 38, 22, 39	Date/Time: 8/23/23
Relinquished by: (signature) 26, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPS Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3259
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-141-GFC, P-142-GFDG, P-143-GFLG, P-144-GFW, P-145-EWP1, P-146-EWP2, P-147-EWP3, P-148-EPB1, P-149-EPB2, P-150-EPB3, P-151-EP1, P-152-EP2, P-153-EP3, P-154-R14F, P-155-S12F, P-156-R10WT, P-157-R11F, P-158-R11EDW, P-159-R14WT, P-160-R14CWP
2/Field Duplicate Pairs: P-146-EWP2 / P-FD-07 (located in SDG 23H3270), P-158-R11EDW / P-FD-08 (located in SDG 23H3270)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 15, 2023 and August 16, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to field duplicate imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3259-01	23H3259-02	23H3259-03	23H3259-04	23H3259-05
Field Sample ID		P-141-GFC	P-142-GFDG	P-143-GFLG	P-144-GFW	P-145-EWP1
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1221	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1232	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1242	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1248	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1254	mg/kg	7.9	3.7	13	1.4	3.4
Aroclor 1260	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1262	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U
Aroclor 1268	mg/kg	1 U	0.98 U	2 U	0.1 U	0.99 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3259-06	23H3259-07	23H3259-08	23H3259-09	23H3259-10
Field Sample ID		P-146-EWP2	P-147-EWP3	P-148-EPB1	P-149-EPB2	P-150-EPB3
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1221	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1232	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1242	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1248	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1254	mg/kg	5.8	5.6	9.3	4.7	19
Aroclor 1260	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1262	mg/kg	1 U	1 U	0.99 U	1 U	2 U
Aroclor 1268	mg/kg	1 U	1 U	0.99 U	1 U	2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3259-11	23H3259-12	23H3259-13	23H3259-14	23H3259-15
Field Sample ID		P-151-EP1	P-152-EP2	P-153-EP3	P-154-R14F	P-155-S12F
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/15/23	08/15/23	08/15/23	08/15/23	08/16/23
Aroclor 1016	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1221	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1232	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1242	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1248	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1254	mg/kg	0.55	0.62	1.2	12	65
Aroclor 1260	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1262	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U
Aroclor 1268	mg/kg	0.099 U	0.1 U	0.1 U	2 U	9.9 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3259-16	23H3259-17	23H3259-18	23H3259-19	23H3259-20
Field Sample ID		P-156-R10WT	P-157-R11F	P-158-R11EDW	P-159-R14WT	P-160-R14CWP
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U
Aroclor 1221	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U
Aroclor 1232	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U
Aroclor 1242	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U
Aroclor 1248	mg/kg	9.9 U	2 U	0.5 UJ	4.9 U	2 U
Aroclor 1254	mg/kg	38	11	2.7	20	8.3
Aroclor 1260	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U
Aroclor 1262	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U
Aroclor 1268	mg/kg	9.9 U	2 U	0.5 U	4.9 U	2 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3259

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1248	P-158-R11EDW, P-FD-08	Field duplicate precision	J / UJ	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3259
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including two field duplicate samples, were listed on the COC for SDG 23H3259. The samples were collected on 08/15/2023 and 08/16/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-141-GFC	23H3259-01	PCBs
P-142-GFDG	23H3259-02	PCBs
P-143-GFLG	23H3259-03	PCBs
P-144-GFW	23H3259-04	PCBs
P-145-EWP1	23H3259-05	PCBs
P-146-EWP2	23H3259-06	PCBs
P-147-EWP3	23H3259-07	PCBs
P-148-EPB1	23H3259-08	PCBs
P-149-EPB2	23H3259-09	PCBs
P-150-EPB3	23H3259-10	PCBs
P-151-EP1	23H3259-11	PCBs
P-152-EP2	23H3259-12	PCBs
P-153-EP3	23H3259-13	PCBs
P-154-R14F	23H3259-14	PCBs
P-155-S12F	23H3259-15	PCBs
P-156-R10WT	23H3259-16	PCBs
P-157-R11F	23H3259-17	PCBs
P-158-R11EDW	23H3259-18	PCBs
P-159-R14WT	23H3259-19	PCBs
P-160-R14CWP	23H3259-20	PCBs

A complete laboratory report was received for SDG 23H3259.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/5 to 1/100. Surrogates were diluted out of samples that had sample dilutions > 1/20. In addition, the recovery of the surrogate decachlorobiphenyl (DCB) for sample P-150-EPB3 (23H3259-10) exceeded the 30-150% limits (154%) on the confirmatory analytical column. All Aroclor results were reported from the primary column analysis for this sample and therefore, no actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-151-EP1 (23H3259-11).

Percent recoveries of Aroclors 1016 and 1260 were within the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. RPDs were ≤ 30%, as specified in the Program QAPP. No actions are required.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-146-EWP2 / P-FD-07 (23H3259-06 / 23H3270-01)
- P-158-R11EDW / P-FD-08 (23H3259-18 / 23H3270-02)

PCBs: Aroclor results met field duplicate precision criteria except for the results Aroclor 1248 in field duplicate pair P-158-R11EDW / P-FD-08, where the absolute difference was > 4x QL for results < 5x QL. Based on the EPA Region I Supplemental Guidance (2020), the detect and non-detect results for Aroclor 1248 are qualified as estimated (J/UJ) in samples P-158-R11EDW and P-FD-08 due to field duplicate imprecision. Professional judgement was used to limit qualification to the field duplicate pair only.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/5 to 1/100. The QLs were greater than 1 mg/kg in samples requiring dilutions ≥ 1/20.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3259 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-146-EWP2**		**P-FD-07**				
	23H3259-06		**23H3270-01**				
Aroclor 1016	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1221	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1232	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1242	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1248	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1254	4.9		5.8		16.82		Ok - RPD < 50%
Aroclor 1260	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1262	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1268	0.4	U	1	U	85.71		Ok - both ND

Note that P-FD-07 is located in SDG 23H3270.

Field Duplicate Evaluation

SDG: 23H3259 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment[1]
Sample ID	**P-158-R11EDW**		**P-FD-08**				
	23H3259-18		**23H3270-02**				
Aroclor 1016	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1221	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1232	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1242	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1248	0.5	U	3.1		144.44	2.60	**J/UJ - abs diff > 4x RL**
Aroclor 1254	2.7		2.7		0.00		Ok - RPD < 50%
Aroclor 1260	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1262	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1268	0.5	U	0.44	U	-12.77		Ok - both ND

[1] Professional judgement used to apply actions to the field duplicate pair only.
Note that P-FD-08 is located in SDG 23H3270.

23H3259 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-141-GFC	8/15/2023	13:20	GRAB	O	U		1				x
2	P-142-GFDG	8/15/2023	13:21	GRAB	O	U		1				x
3	P-143-GFLG	8/15/2023	13:22	GRAB	O	U		1				x
4	P-144-GFW	8/15/2023	13:23	GRAB	O	U		1				x
5	P-145-EWP1	8/15/2023	13:45	GRAB	O	U		1				x
6	P-146-EWP2	8/15/2023	13:46	GRAB	O	U		1				x
7	P-147-EWP3	8/15/2023	13:47	GRAB	O	U		1				x
8	P-148-EPB1	8/15/2023	13:48	GRAB	O	U		1				x
9	P-149-EPB2	8/15/2023	13:49	GRAB	O	U		1				x
10	P-150-EPB3	8/15/2023	13:50	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 1258 8-22-23
Received by: (signature)	Date/Time: 1258 8-22-23
Relinquished by: (signature)	Date/Time: 1746 8-22-23
Received by: (signature) 4.0 C VII 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3259 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-151-EP1	8/15/2023	13:51	GRAB	O	U		3				x
12	P-152-EP2	8/15/2023	13:52	GRAB	O	U		1				x
13	P-153-EP3	8/15/2023	13:53	GRAB	O	U		1				x
14	P-154-R14F	8/15/2023	8:00	GRAB	O	U		1				x
15	P-155-S12F	8/16/2023	8:01	GRAB	O	U		1				x
16	P-156-R10WT	8/16/2023	8:02	GRAB	O	U		1				x
17	P-157-R11F	8/16/2023	8:03	GRAB	O	U		1				x
18	P-158-R11EDW	8/16/2023	8:04	GRAB	O	U		1				x
19	P-159-R14WT	8/16/2023	8:05	GRAB	O	U		1				x
20	P-160-R14CWP	8/16/2023	8:06	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8-22-23 1250
Received by: (signature)	Date/Time: 8/22/23 1930
Relinquished by: (signature)	Date/Time: 8.22.23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3260
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-161-R16SWP, P-162-R12SDW, P-163-R14WDW, P-164-R11WP, P-165-R16D, P-166-EX, P-167-EX, P-168-EX, P-169-EX, P-170-EX, P-171-EX, P-172-EX, P-173-EX, P-174-EX, P-175-EX, P-176-EX, P-177-EX, P-178-EX, P-179-EX, P-180-EX
1/Field Duplicate Pair: P-176-EX / P-FD-10 (located in SDG 23H3270)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 16, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards
	• Matrix Spike Analysis
NA	• Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to exceeded MS/MSD RPD criteria.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3260-01	23H3260-02	23H3260-03	23H3260-04	23H3260-05
Field Sample ID		P-161-R16SWP	P-162-R12SDW	P-163-R14WDW	P-164-R11WP	P-165-R16D
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U
Aroclor 1221	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U
Aroclor 1232	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U
Aroclor 1242	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U
Aroclor 1248	mg/kg	17	3.6	3.5	4.1 U	4.4 U
Aroclor 1254	mg/kg	18	3.3	2.1	20	34
Aroclor 1260	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U
Aroclor 1262	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U
Aroclor 1268	mg/kg	5 U	0.8 U	0.89 U	4.1 U	4.4 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3260-06	23H3260-07	23H3260-08	23H3260-09	23H3260-10
Field Sample ID		P-166-EX	P-167-EX	P-168-EX	P-169-EX	P-170-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1221	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1232	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1242	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1248	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1254	mg/kg	5.7	4.5	1	1.8	1
Aroclor 1260	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1262	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U
Aroclor 1268	mg/kg	0.95 U	0.96 U	0.46 U	0.47 U	0.48 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3260-11	23H3260-12	23H3260-13	23H3260-14	23H3260-15
Field Sample ID		P-171-EX	P-172-EX	P-173-EX	P-174-EX	P-175-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1221	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1232	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1242	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1248	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1254	mg/kg	1.7	9700	7100	20000	1.8
Aroclor 1260	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1262	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U
Aroclor 1268	mg/kg	0.49 U	900 U	1400 U	3400 U	0.43 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3260-16	23H3260-17	23H3260-18	23H3260-19	23H3260-20
Field Sample ID		P-176-EX	P-177-EX	P-178-EX	P-179-EX	P-180-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1221	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1232	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1242	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1248	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1254	mg/kg	0.62	0.72 J	2.4	1.8	3
Aroclor 1260	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1262	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U
Aroclor 1268	mg/kg	0.47 U	0.47 U	0.93 U	0.97 U	0.92 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3260

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-177-EX	MS/MSD RPDs	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3260
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including one field duplicate sample, were listed on the COC for SDG 23H3260. The samples were collected on 08/16/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-161-R16SWP	23H3260-01	PCBs
P-162-R12SDW	23H3260-02	PCBs
P-163-R14WDW	23H3260-03	PCBs
P-164-R11WP	23H3260-04	PCBs
P-165-R16D	23H3260-05	PCBs
P-166-EX	23H3260-06	PCBs
P-167-EX	23H3260-07	PCBs
P-168-EX	23H3260-08	PCBs
P-169-EX	23H3260-09	PCBs
P-170-EX	23H3260-10	PCBs
P-171-EX	23H3260-11	PCBs
P-172-EX	23H3260-12	PCBs
P-173-EX	23H3260-13	PCBs
P-174-EX	23H3260-14	PCBs
P-175-EX	23H3260-15	PCBs
P-176-EX	23H3260-16	PCBs
P-177-EX	23H3260-17	PCBs
P-178-EX	23H3260-18	PCBs
P-179-EX	23H3260-19	PCBs
P-180-EX	23H3260-20	PCBs

A complete laboratory report was received for SDG 23H3260.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/5 to 1/40,000. Surrogates were diluted out of samples that had sample dilutions > 1/20. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-177-EX (23H3260-17).

Percent recoveries of Aroclors 1016 and 1260 were within the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. RPDs exceeded the Program QAPP criterion of ≤ 30% in 3 of the 4 RPDs. RPDs for the Aroclor 1016 and 1260 results exceeded the Program QAPP limit of ≤ 30% on the primary column. All Aroclor results for the parent sample were reported from the primary column analysis. Based on the NFGs (2020), the detected Aroclor results are qualified as estimated (J) in sample P-177-EX due to the high RPDs and non-detect results are accepted unqualified. Note that only Aroclor 1254 was detected in the sample.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. Serial Dilution (metals only)

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-176-EX / P-FD-10 (23H3260-16 / 23H3270-04)

PCBs: Aroclor results met field duplicate precision criteria and no action is required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL. No action is required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/5 to 1/40,000. The QLs were greater than 1 mg/kg in samples requiring dilutions ≥ 1/50.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3260 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-176-EX**		**P-FD-10**				
	23H3260-16		**23H3270-04**				
Aroclor 1016	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1221	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1232	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1242	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1248	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1254	0.62		0.56		-10.17	-0.06	Ok - abs diff < 4x RL
Aroclor 1260	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1262	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1268	0.47	U	0.35	U	-29.27		Ok - both ND

Note that P-FD-10 is located in SDG 23H3270.

23H3260

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-161-R16SWP	8/16/2023	8:07	GRAB	O	U		1				x
2	P-162-R12SDW	8/16/2023	8:08	GRAB	O	U		1				x
3	P-163-R14WDW	8/16/2023	8:09	GRAB	O	U		1				x
4	P-164-R11WP	8/16/2023	8:10	GRAB	O	U		1				x
5	P-165-R16D	8/16/2023	8:11	GRAB	O	U		1				x
6	P-166-Ex	8/16/2023	8:12	GRAB	O	U		1				x
7	P-167-Ex	8/16/2023	8:13	GRAB	O	U		1				x
8	P-168-Ex	8/16/2023	8:14	GRAB	O	U		1				x
9	P-169-Ex	8/16/2023	8:15	GRAB	O	U		1				x
10	P-170-Ex	8/16/2023	8:16	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8-22-23 1258
Received by: (signature)	Date/Time: 8-22-23 1258
Relinquished by: (signature)	Date/Time: 8-22-23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1742
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3260

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-171-Ex	8/16/2023	8:17	GRAB	O	U		1				x
12	P-172-Ex	8/16/2023	8:18	GRAB	O	U		1				x
13	P-173-Ex	8/16/2023	8:19	GRAB	O	U		1				x
14	P-174-Ex	8/16/2023	8:20	GRAB	O	U		1				x
15	P-175-Ex	8/16/2023	8:21	GRAB	O	U		1				x
16	P-176-Ex	8/16/2023	8:22	GRAB	O	U		1				x
17	P-177-Ex	8/16/2023	8:23	GRAB	O	U		3				x
18	P-178-Ex	8/16/2023	8:24	GRAB	O	U		1				x
19	P-179-Ex	8/16/2023	8:25	GRAB	O	U		1				x
20	P-180-Ex	8/16/2023	8:26	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	8/22/23 1258
Received by: (signature)	Date/Time:	8/22/23 1258
Relinquished by: (signature)	Date/Time:	8.22.23 1746
Received by: (signature)	Date/Time:	8.22.23 1746
Relinquished by: (signature) 38, 22, 3.9	Date/Time:	8/22/23
Received by: (signature) 26, 56	Date/Time:	1746
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3261
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-181-EX, P-182-EX, P-183-EX, P-184-EX, P-185-EX, P-186-EX, P-187-EX, P-188-EX, P-189-EX, P-190-EX, P-191-EX, P-192-EX, P-193-GC, P-194-GC, P-195-GC, P-196-GC, P-197-GC, P-198-GC, P-199, P-200

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 16, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3261-01	23H3261-02	23H3261-03	23H3261-04	23H3261-05
Field Sample ID		P-181-EX	P-182-EX	P-183-EX	P-184-EX	P-185-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U
Aroclor 1221	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U
Aroclor 1232	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U
Aroclor 1242	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U
Aroclor 1248	mg/kg	11	8.8	13	200 U	230 U
Aroclor 1254	mg/kg	11	12	12	7500	7700
Aroclor 1260	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U
Aroclor 1262	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U
Aroclor 1268	mg/kg	2.3 U	2 U	2.1 U	200 U	230 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3261-06	23H3261-07	23H3261-08	23H3261-09	23H3261-10
Field Sample ID		P-186-EX	P-187-EX	P-188-EX	P-189-EX	P-190-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1221	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1232	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1242	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1248	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1254	mg/kg	9600	38	110	360	1.1 J
Aroclor 1260	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1262	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U
Aroclor 1268	mg/kg	220 U	4.3 U	8.1 U	21 U	0.45 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3261-11	23H3261-12	23H3261-13	23H3261-14	23H3261-15
Field Sample ID		P-191-EX	P-192-EX	P-193-GC	P-194-GC	P-195-GC
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1221	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1232	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1242	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1248	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1254	mg/kg	1	1.7	1.6	0.64	0.85
Aroclor 1260	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1262	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U
Aroclor 1268	mg/kg	0.44 U	0.41 U	0.48 U	0.38 U	0.37 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3261-16	23H3261-17	23H3261-18	23H3261-19	23H3261-20
Field Sample ID		P-196-GC	P-197-GC	P-198-GC	P-199	P-200
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1221	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1232	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1242	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1248	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1254	mg/kg	1.5	0.57	1.1	7.6	4.6
Aroclor 1260	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1262	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U
Aroclor 1268	mg/kg	0.42 U	0.37 U	0.4 U	1.9 U	0.46 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3261

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-190-EX	Dual column precision	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3261
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples were listed on the COC for SDG 23H3261. The samples were collected on 08/16/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-181-EX	23H3261-01	PCBs
P-182-EX	23H3261-02	PCBs
P-183-EX	23H3261-03	PCBs
P-184-EX	23H3261-04	PCBs
P-185-EX	23H3261-05	PCBs
P-186-EX	23H3261-06	PCBs
P-187-EX	23H3261-07	PCBs
P-188-EX	23H3261-08	PCBs
P-189-EX	23H3261-09	PCBs
P-190-EX	23H3261-10	PCBs
P-191-EX	23H3261-11	PCBs
P-192-EX	23H3261-12	PCBs
P-193-GC	23H3261-13	PCBs
P-194-GC	23H3261-14	PCBs
P-195-GC	23H3261-15	PCBs
P-196-GC	23H3261-16	PCBs
P-197-GC	23H3261-17	PCBs
P-198-GC	23H3261-18	PCBs
P-199	23H3261-19	PCBs
P-200	23H3261-20	PCBs

A complete laboratory report was received for SDG 23H3261.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/5 to 1/500. Surrogates were diluted out of all samples that required dilution. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-189-EX (23H3261-09).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. RPDs were < 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent sample. No action is taken.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL except for the Aroclor 1254 detection in sample P-190-EX (23H3261-10), where the RPD was > 25% (25.6%). Based on the NFGs (2020), the detected result for Aroclor 1254 is qualified as estimated (J) in sample P-190-EX due to dual column imprecision.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/5 to 1/500. The QLs were greater than 1 mg/kg in samples requiring dilutions.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

2343261

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-181-Ex	8/16/2023	8;27	GRAB	O	U		1				x
2	P-182-Ex	8/16/2023	8:28	GRAB	O	U		1				x
3	P-183-Ex	8/16/2023	8:29	GRAB	O	U		1				x
4	P-184-Ex	8/16/2023	8:30	GRAB	O	U		1				x
5	P-185-Ex	8/16/2023	8:31	GRAB	O	U		1				x
6	P-186-Ex	8/16/2023	8:32	GRAB	O	U		1				x
7	P-187-Ex	8/16/2023	8:33	GRAB	O	U		1				x
8	P-188-Ex	8/16/2023	8:34	GRAB	O	U		1				x
9	P-189-Ex	8/16/2023	8:35	GRAB	O	U		3				x
10	P-190-Ex	8/16/2023	8:36	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 1245 8.22.23	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 1245 8.22.23	
Relinquished by: (signature)	Date/Time: 1746 8.22.23	
Received by: (signature) 38.2, 5.9	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3261

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-191-Ex	8/16/2023	8:37	GRAB	O	U		1				x
12	P-192-Ex	8/16/2023	8:38	GRAB	O	U		1				x
13	P-193-GC	8/16/2023	8:39	GRAB	O	U		1				x
14	P-194-GC	8/16/2023	8:40	GRAB	O	U		1				x
15	P-195-GC	8/16/2023	8:41	GRAB	O	U		1				x
16	P-196-GC	8/16/2023	8:42	GRAB	O	U		1				x
17	P-197-GC	8/16/2023	8:43	GRAB	O	U		1				x
18	P-198-GC	8/16/2023	8:44	GRAB	O	U		1				x
19	P-199	8/16/2023	8:45	GRAB	O	U		1				x
20	P-200	8/16/2023	8:46	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	8-22-23 1325
Received by: (signature)	8-22-23 1325
Relinquished by: (signature)	8-22-23 1746
Received by: (signature) 3.8, 2.2, 3.9	8/22/23
Relinquished by: (signature) 26, 5.6	1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3264
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-201, P-202, P-203-EX, P-204-R17W, P-205-R17W, P-206-R17W, P-207-R16C, P-208-R14SP, P-209-R16SP, P-210-R16NWP, P-211-R15CP, P-212-R11EP, P-213-R12CPB, P-214-R12CDW, P-215-R15CPW, P-216-R13CP, P-217-R11SDW, P-218-R13WT, P-219-R14EDW, P-220-S12C

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 16, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3264-01	23H3264-02	23H3264-03	23H3264-04	23H3264-05
Field Sample ID		P-201	P-202	P-203-EX	P-204-R17W	P-205-R17W
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1221	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1232	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1242	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1248	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1254	mg/kg	7.9	8.5	0.53	4.8	8.2
Aroclor 1260	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1262	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U
Aroclor 1268	mg/kg	1 U	1.9 U	0.089 U	1.8 U	2.3 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3264-06	23H3264-07	23H3264-08	23H3264-09	23H3264-10
Field Sample ID		P-206-R17W	P-207-R16C	P-208-R14SP	P-209-R16SP	P-210-R16NWP
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U
Aroclor 1221	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U
Aroclor 1232	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U
Aroclor 1242	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U
Aroclor 1248	mg/kg	1.9 U	4.2 U	0.48 U	2.1 J	4.4 U
Aroclor 1254	mg/kg	10	16	1.4	2.3	26
Aroclor 1260	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U
Aroclor 1262	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U
Aroclor 1268	mg/kg	1.9 U	4.2 U	0.48 U	0.97 U	4.4 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3264-11	23H3264-12	23H3264-13	23H3264-14	23H3264-15
Field Sample ID		P-211-R15CP	P-212-R11EP	P-213-R12CPB	P-214-R12CDW	P-215-R15CPW
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1221	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1232	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1242	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1248	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1254	mg/kg	0.59	16	9	5.3	25
Aroclor 1260	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1262	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U
Aroclor 1268	mg/kg	0.43 U	3.9 U	2.3 U	1 U	4.1 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3264-16	23H3264-17	23H3264-18	23H3264-19	23H3264-20
Field Sample ID		P-216-R13CP	P-217-R11SDW	P-218-R13WT	P-219-R14EDW	P-220-S12C
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1221	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1232	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1242	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1248	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1254	mg/kg	0.21	6.2	11	6.8	19
Aroclor 1260	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1262	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U
Aroclor 1268	mg/kg	0.092 U	1.8 U	3.4 U	1.8 U	3.5 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3264

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1248	P-209-R16SP	Dual column precision	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 09/28/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3264
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples were listed on the COC for SDG 23H3264. The samples were collected on 08/16/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-201	23H3264-01	PCBs
P-202	23H3264-02	PCBs
P-203-EX	23H3264-03	PCBs
P-204-R17W	23H3264-04	PCBs
P-205-R17W	23H3264-05	PCBs
P-206-R17W	23H3264-06	PCBs
P-207-R16C	23H3264-07	PCBs
P-208-R14SP	23H3264-08	PCBs
P-209-R16SP	23H3264-09	PCBs
P-210-R16NWP	23H3264-10	PCBs
P-211-R15CP	23H3264-11	PCBs
P-212-R11EP	23H3264-12	PCBs
P-213-R12CPB	23H3264-13	PCBs
P-214-R12CDW	23H3264-14	PCBs
P-215-R15CPW	23H3264-15	PCBs
P-216-R13CP	23H3264-16	PCBs
P-217-R11SDW	23H3264-17	PCBs
P-218-R13WT	23H3264-18	PCBs
P-219-R14EDW	23H3264-19	PCBs
P-220-S12C	23H3264-20	PCBs

A complete laboratory report was received for SDG 23H3264.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

   Not assessed for S2AVM.

4. **Lab and Field Blanks**

   PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

   An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

   Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

   PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples and no actions are required.

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pairs associated with the samples met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

   If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
   If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

   MS/MSD analyses were not performed for this SDG.

9. **Laboratory Duplicates**

   PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

    PCBs: Not applicable to this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL except for the Aroclor 1248 detection in sample P-209-R16SP (23H3264-09), where the RPD was > 25% (25.6%). Based on the NFGs (2020), the detected result for Aroclor 1248 is qualified as estimated (J) in sample P-209-R16SP due to dual column imprecision.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/5 to 1/10. The QLs were greater than 1 mg/kg in samples requiring dilutions; however, note that some samples (23H3264-01, -03, -08, -09, -11, -14, and -16) were extracted using a larger volume of sample than the other samples in the SDG. While these samples also required dilutions, the QLs for these samples met the PAL due to the extra sample volume extracted.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23H3264

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-201	8/16/2023	8:47	GRAB	O	U		1				x
2	P-202	8/16/2023	8:48	GRAB	O	U		1				x
3	P-203-Ex	8/16/2023	8:49	GRAB	O	U		1				x
4	P-204-R17W	8/16/2023	8:50	GRAB	O	U		1				x
5	P-205-R17W	8/16/2023	8:51	GRAB	O	U		1				x
6	P-206-R17W	8/16/2023	8:52	GRAB	O	U		1				x
7	P-207-R16C	8/16/2023	8:53	GRAB	O	U		1				x
8	P-208-R14CP	8/16/2023	8:54	GRAB	O	U		1				x
9	P-209-R16SP	8/16/2023	8:55	GRAB	O	U		1				x
10	P-210-R16NWP	8/16/2023	8:56	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8.22.23 1255
Received by: (signature)	Date/Time: 8.22.23 1255
Relinquished by: (signature)	Date/Time: 8.22.23 1746
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 26, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23H3264

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-211-R15CP	8/16/2023	8:57	GRAB	O	U		1				x
12	P-212-R11EP	8/16/2023	8:58	GRAB	O	U		1				x
13	P-213-R12CPB	8/16/2023	8:59	GRAB	O	U		1				x
14	P-214-R12CDW	8/16/2023	9:00	GRAB	O	U		1				x
15	P-215-R15CPW	8/16/2023	9:01	GRAB	O	U		1				x
16	P-216-R13CP	8/16/2023	9:02	GRAB	O	U		1				x
17	P-217-R11SDW	8/16/2023	9:03	GRAB	O	U		1				x
18	P-218-R13WT	8/16/2023	9:04	GRAB	O	U		1				x
19	P-219-R14EDW	8/16/2023	9:05	GRAB	O	U		1				x
20	P-220-S12C	8/16/2023	9:06	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)		Date/Time: 1258 8/22/23
Received by: (signature)		Date/Time: 1258 8-22-23
Relinquished by: (signature)		Date/Time: 1746 8-22-23
Received by: (signature)	3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature)	2.6, 5.6	Date/Time: 1746
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3265
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-201, P-202, P-203-EX, P-204-R17W, P-205-R17W, P-206-R17W, P-207-R16C, P-208-R14SP, P-209-R16SP, P-210-R16NWP, P-211-R15CP, P-212-R11EP, P-213-R12CPB, P-214-R12CDW, P-215-R15CPW, P-216-R13CP, P-217-R11SDW, P-218-R13WT, P-219-R14EDW, P-220-S12C

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 16, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3265-01	23H3265-02	23H3265-03	23H3265-04	23H3265-05
Field Sample ID		P-221-R15WT	P-222-R16NP	P-223-S12N	P-224-R23C	P-225-R13S
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1221	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1232	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1242	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1248	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1254	mg/kg	63	16	64	950	4.5
Aroclor 1260	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1262	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U
Aroclor 1268	mg/kg	3.8 U	3.6 U	4.7 U	45 U	4.2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3265-06	23H3265-07	23H3265-08	23H3265-09	23H3265-10
Field Sample ID		P-226-R14SDW	P-227-R14-EP	P-228-R12WT	P-229-R14CDW	P-230-R13CWP
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U
Aroclor 1221	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U
Aroclor 1232	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U
Aroclor 1242	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U
Aroclor 1248	mg/kg	2.1 U	1.8	4.1 U	2.2 U	2.2 U
Aroclor 1254	mg/kg	12	3	26	8.9	4.5
Aroclor 1260	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U
Aroclor 1262	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U
Aroclor 1268	mg/kg	2.1 U	1.7 U	4.1 U	2.2 U	2.2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3265-11	23H3265-12	23H3265-13	23H3265-14	23H3265-15
Field Sample ID		P-231-R11CP	P-232-R13F	P-233-R13E	P-234-R12F	P-235-R25D
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U
Aroclor 1221	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U
Aroclor 1232	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U
Aroclor 1242	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U
Aroclor 1248	mg/kg	0.91 U	4.8 U	4.1 U	6.6	4.5 U
Aroclor 1254	mg/kg	1.7	27	8.3	6.4	19
Aroclor 1260	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U
Aroclor 1262	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U
Aroclor 1268	mg/kg	0.91 U	4.8 U	4.1 U	0.94 U	4.5 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3265-16	23H3265-17	23H3265-18	23H3265-19	23H3265-20
Field Sample ID		P-236-R15S	P-237-R33NB	P-238-R35C	P-239-S01F	P-240-R13D
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1221	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1232	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1242	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1248	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1254	mg/kg	59	320	130	110	25
Aroclor 1260	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1262	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U
Aroclor 1268	mg/kg	3.8 U	24 U	9.3 U	7.6 U	3.9 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3265

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 10/02/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3265
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples were listed on the COC for SDG 23H3265. The samples were collected on 08/16/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-221-R15WT	23H3265-01	PCBs
P-222-R16NP	23H3265-02	PCBs
P-223-S12N	23H3265-03	PCBs
P-224-R23C	23H3265-04	PCBs
P-225-R13S	23H3265-05	PCBs
P-226-R14SDW	23H3265-06	PCBs
P-227-R14-EP	23H3265-07	PCBs
P-228-R12WT	23H3265-08	PCBs
P-229-R14CDW	23H3265-09	PCBs
P-230-R13CWP	23H3265-10	PCBs
P-231-R11CP	23H3265-11	PCBs
P-232-R13F	23H3265-12	PCBs
P-233-R13E	23H3265-13	PCBs
P-234-R12F	23H3265-14	PCBs
P-235-R25D	23H3265-15	PCBs
P-236-R15S	23H3265-16	PCBs
P-237-R33NB	23H3265-17	PCBs
P-238-R35C	23H3265-18	PCBs
P-239-S01F	23H3265-19	PCBs
P-240-R13D	23H3265-20	PCBs

A complete laboratory report was received for SDG 23H3265.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except for those samples requiring dilutions. Surrogates were diluted out of samples with dilutions > 1/20. Sample dilutions ranged from 1/5 to 1/100. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pairs associated with the samples met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on samples P-225-R13S (23H3265-05) and P-237-R33NB (23H3265-17).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses of P-225-R13S on both analytical columns except for the recovery of Aroclor 1016, which was within the limits on the primary column (140%). RPDs were < 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent sample. No action is taken.

Percent recoveries of Aroclor 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses of P-237-R33NB on both analytical columns. RPDs were < 30%, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent sample. No action is taken. Aroclor 1016 was not recovered in this MS/MSD pair due to the required sample dilution below spike reporting limit. Note that a lower sample volume was extracted for this parent sample than for parent sample P-225-R13S, above, and therefore, the reporting limit for parent sample P-237-R33NB was higher even though both parent samples required 1/50 dilutions. No action is taken.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

PCBs: Not applicable to this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. **Internal Standards**

Not applicable to these analyses.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per NFG) were met for all Aroclor detections > QL and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/5 to 1/100. The QLs were greater than 1 mg/kg in samples requiring dilutions; however, note that samples 23H3265-11 and 23H3265-14 were extracted using a larger volume of sample than the other samples in the SDG. While these samples also required dilutions, the QLs for these samples meet the PAL due to the extra sample volume extracted.

16. **Other**

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23H3265

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-221-R15WT	8/16/2023	9:07	GRAB	O	U		1				x
2	P-222-R16NP	8/16/2023	9:08	GRAB	O	U		1				x
3	P-223-S12N	8/16/2023	9:09	GRAB	O	U		1				x
4	P-224-R23C	8/16/2023	9:10	GRAB	O	U		1				x
5	P-225-R13S	8/16/2023	9:11	GRAB	O	U		1				x
6	P-226-R14SDW	8/16/2023	9:12	GRAB	O	U		1				x
7	P-227-R14-EP	8/16/2023	9:13	GRAB	O	U		1				x
8	P-228-R12WT	8/16/2023	9:14	GRAB	O	U		1				x
9	P-229-R14CDW	8/16/2023	9:51	GRAB	O	U		1				x
10	P-230-R13CWP	8/16/2023	9:16	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: RX 8.22.23	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 2578 8.22.23	
Relinquished by: (signature)	Date/Time: 1746 8.22.23	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 26, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3265

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

ANALYSIS REQUESTED

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-231-R11CP	8/16/2023	9:17	GRAB	O	U		1				x
12	P-232-R13F	8/16/2023	9:18	GRAB	O	U		1				x
13	P-233-R13E	8/16/2023	9:19	GRAB	O	U		1				x
14	P-234-R12F	8/16/2023	9:20	GRAB	O	U		1				x
15	P-235-R25D	8/16/2023	9:21	GRAB	O	U		1				x
16	P-236-R15S	8/16/2023	9:22	GRAB	O	U		1				x
17	P-237-R33NB	8/16/2023	8:23	GRAB	O	U		3				x
18	P-238-R35C	8/16/2023	9:24	GRAB	O	U		1				x
19	P-239-S01F	8/16/2023	9:25	GRAB	O	U		1				x
20	P-240-R13D	8/16/2023	9:26	GRAB	O	U		1				x

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 1255 8.22.23	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 1258 8-22-23	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8, 22, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3267
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

20/Building Material Samples: P-241-R37C, P-242-R12-CP, P-243-R12NDW, P-244-R12EDW, P-245-R35S, P-246-R36C, P-247-R12NP, P-248-R11WT, P-249-R14WP, P-250-R11D, P-251-R12EW, P-252-R17S, P-253-R15D, P-254-R11CDW, P-255-R14SP, P-256-R24D, P-257-S12S, P-258-R11WDW, P-259-R15E, P-260-R34E
1/Field Duplicate Pair: P-252-R17S / P-FD-14 (located in SDG 23H3270)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14, and August 16, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards
*	• Matrix Spike Analysis

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3267-01	23H3267-02	23H3267-03	23H3267-04	23H3267-05
Field Sample ID		P-241-R37C	P-242-R12-CP	P-243-R12NDW	P-244-R12EDW	P-245-R35S
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U
Aroclor 1221	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U
Aroclor 1232	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U
Aroclor 1242	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U
Aroclor 1248	mg/kg	3.5 U	0.37 U	2.3 U	2.5	25 U
Aroclor 1254	mg/kg	65	0.66	6.6	3	220
Aroclor 1260	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U
Aroclor 1262	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U
Aroclor 1268	mg/kg	3.5 U	0.37 U	2.3 U	0.45 U	25 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3267-06	23H3267-07	23H3267-08	23H3267-09	23H3267-10
Field Sample ID		P-246-R36C	P-247-R12NP	P-248-R11WT	P-249-R14WP	P-250-R11D
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1221	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1232	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1242	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1248	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1254	mg/kg	130	2.4	33	1.5	50
Aroclor 1260	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1262	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U
Aroclor 1268	mg/kg	21 U	0.42 U	4.2 U	0.43 U	4.7 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3267-11	23H3267-12	23H3267-13	23H3267-14	23H3267-15
Field Sample ID		P-251-R12EW	P-252-R17S	P-253-R15D	P-254-R11CDW	P-255-R14SP
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U
Aroclor 1221	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U
Aroclor 1232	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U
Aroclor 1242	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U
Aroclor 1248	mg/kg	2.3 U	1.9 U	4.4 U	3.7 J	4.2 U
Aroclor 1254	mg/kg	10	12	32	3.4 J	5.3
Aroclor 1260	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U
Aroclor 1262	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U
Aroclor 1268	mg/kg	2.3 U	1.9 U	4.4 U	0.5 U	4.2 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3267-16	23H3267-17	23H3267-18	23H3267-19	23H3267-20
Field Sample ID		P-256-R24D	P-257-S12S	P-258-R11WDW	P-259-R15E	P-260-R34E
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/14/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1221	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1232	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1242	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1248	mg/kg	33 J	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1254	mg/kg	27	55	15	56	200
Aroclor 1260	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1262	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U
Aroclor 1268	mg/kg	4.4 U	4.6 U	3.9 U	4.5 U	20 U

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 10/03/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3267
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including one field duplicate sample, were listed on the COC for SDG 23H3267. The samples were collected on 08/14/2023 and 08/16/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-241-R37C	23H3267-01	PCBs
P-242-R12-CP	23H3267-02	PCBs
P-243-R12NDW	23H3267-03	PCBs
P-244-R12EDW	23H3267-04	PCBs
P-245-R35S	23H3267-05	PCBs
P-246-R36C	23H3267-06	PCBs
P-247-R12NP	23H3267-07	PCBs
P-248-R11WT	23H3267-08	PCBs
P-249-R14WP	23H3267-09	PCBs
P-250-R11D	23H3267-10	PCBs
P-251-R12EW	23H3267-11	PCBs
P-252-R17S	23H3267-12	PCBs
P-253-R15D	23H3267-13	PCBs
P-254-R11CDW	23H3267-14	PCBs
P-255-R14SP	23H3267-15	PCBs
P-256-R24D	23H3267-16	PCBs
P-257-S12S	23H3267-17	PCBs
P-258-R11WDW	23H3267-18	PCBs
P-259-R15E	23H3267-19	PCBs
P-260-R34E	23H3267-20	PCBs

A complete laboratory report was received for SDG 23H3267.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/5 to 1/50. Surrogates were diluted out of samples that had sample dilutions > 1/20. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pairs associated with the samples met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on samples P-257-S12S (23H3267-17), P-258-R11WDW (23H3267-18), and P-259-R15E (23H3267-19).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses of samples P-257-S12S and P-259-R15E on both analytical columns. RPDs met the < 30% limit, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent samples. No action is taken.

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses of samples P-258-R11WDW on both analytical columns. RPDs exceeded the < 30% limit, as specified in the Program QAPP. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent samples. No action is taken.

9. Laboratory Duplicates

PCBs: Not applicable to this analysis.

10. Serial Dilution (metals only)

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-252-R17S / P-FD-14 (23H3267-12 / 23H3270-08)

PCBs: Aroclor results met field duplicate precision criteria and no action is required.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per the NFGs) were met for all Aroclor detections > QL except for the Aroclor 1248 detections in samples P-254-R11CDW (23H3267-14) and P-256-R24D (23H3267-16), and the Aroclor 1254 detection in sample P-254-R11CDW (23H3267-14), where RPDs were > 25%. Based on the NFGs (2020), the detected results for Aroclor 1248 are qualified as estimated (J) in samples P-254-R11CDW and P-256-R24D, and the Aroclor 1254 detection in sample P-254-R11CDW was qualified as estimated (J) due to dual column imprecision.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/5 to 1/50.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3267 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-252-R17S**		**P-FD-14**				
	23H3267-12		**23H3270-08**				
Aroclor 1016	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1221	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1232	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1242	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1248	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1254	12		6.1		-65.19	-5.90	Ok - abs diff < 4x RL
Aroclor 1260	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1262	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1268	1.9	U	1.8	U	-5.41		Ok - both ND

Note that P-FD-14 is located in SDG 23H3270.

23173267

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time
7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	P-241-R37C	8/16/2023	9:27	GRAB	O	U		1			
2	P-242-R12-CP	8/16/2023	9:28	GRAB	O	U		1			
3	P-243-R12NDW	8/16/2023	9:29	GRAB	O	U		1			
4	P-244-R12EDW	8/16/2023	9:30	GRAB	O	U		1			
5	P-245-R35S	8/16/2023	9:31	GRAB	O	U		1			
6	P-246-R36C	8/16/2023	9:32	GRAB	O	U		1			
7	P-247-R12NP	8/16/2023	9:33	GRAB	O	U		1			
8	P-248-R11WT	8/16/2023	9:34	GRAB	O	U		1			
9	P-249-R14WP	8/16/2023	9:35	GRAB	O	U		1			
10	P-250-R11D	8/16/2023	9:36	GRAB	O	U		1			

PCBs 8082 Soxhlet Extraction

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 8.22.23 1258	
Received by: (signature)	Date/Time: 8.22.23 1258	
Relinquished by: (signature)	Date/Time: 8.22.23 1746	
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Comments:**

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

RF

23H3267

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-251-R12EW	8/16/2023	9:37	GRAB	O	U		1				x
12	P-252-R17S	8/16/2023	9:38	GRAB	O	U		1				x
13	P-253-R15D	8/16/2023	9:39	GRAB	O	U		1				x
14	P-254-R11CDW	8/16/2023	9:40	GRAB	O	U		1				x
15	P-255-R14SP	8/16/2023	9:41	GRAB	O	U		1				x
16	P-256-R24D	8/14/2023	9:42	GRAB	O	U		1				x
17	P-257-S12S	8/16/2023	9:43	GRAB	O	U		3				x
18	P-258-R11WDW	8/16/2023	9:44	GRAB	O	U		3				x
19	P-259-R15E	8/16/2023	12:00	GRAB	O	U		3				x
20	P-260-R34E	8/16/2023	9:46	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 1258 8.22.23
Received by: (signature) TimPACE	Date/Time: 1258 8.22.23
Relinquished by: (signature) TimPACE	Date/Time: 1746 8.22.23
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3268
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

14/Building Material Samples: P-261-R34S, P-262-EX, P-263-EX, P-264-EX, P-265-R17EC1, P-266-R17EC2, P-267-R17EC3, P-268-R17EC4, P-269-R23SS, P-270-R27SS, P-271-R25ASS, P-272-R21SS, P-273-R31SS, P-274-S12R
6/Field Duplicate Samples: P-FD-01, P-FD-02, P-FD-03, P-FD-04, P-FD-05, P-FD-06
8/Field Duplicate Pairs: P-263-EX / P-FD-09 (23H3268-03 / 23H3270-03), P-269-R23SS / P-FD-15 (23H3268-09 / 23H3270-09), P-FD-01 / P-018-R06E (23H3268-15 / 23H3248-18), P-FD-02 / P-040-R09W (23H3268-16 / 23H3250-20), P-FD-03 / P-065-S01C (23H3268-17 / 23H3255-05), P-FD-04 / P-111-R28SC (23H3268-18 / 23H3257-11), P-FD-05 / P-127-R33NC (23H3268-19 / 23H3258-07), P-FD-06 / P-133-R16EP (23H3268-20 / 23H3258-13)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14 through August 17, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

* • Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Preservation and Technical Holding Times

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column and field duplicate imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3268-01	23H3268-02	23H3268-03	23H3268-04	23H3268-05
Field Sample ID		P-261-R34S	P-262-EX	P-263-EX	P-264-EX	P-265-R17EC1
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/16/23	08/16/23
Aroclor 1016	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1221	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1232	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1242	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1248	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1254	mg/kg	32	70	160	180	6.3
Aroclor 1260	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1262	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U
Aroclor 1268	mg/kg	4.4 U	3.6 U	8.7 U	4.1 U	0.44 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3268-06	23H3268-07	23H3268-08	23H3268-09	23H3268-10
Field Sample ID		P-266-R17EC2	P-267-R17EC3	P-268-R17EC4	P-269-R23SS	P-270-R27SS
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	08/16/23	08/16/23	08/16/23	08/17/23	08/17/23
Aroclor 1016	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1221	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1232	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1242	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1248	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1254	mg/kg	5.3 J	2.9	3.1	0.1 U	0.1 U
Aroclor 1260	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1262	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U
Aroclor 1268	mg/kg	0.44 U	0.38 U	0.42 U	0.1 U	0.1 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3268-11RE1	23H3268-12	23H3268-13	23H3268-14	23H3268-15
Field Sample ID		P-271-R25ASS	P-272-R21SS	P-273-R31SS	P-274-S12R	P-FD-01
Sample Type		N	N	N	N	FD
Parent Sample ID						P-018-R06E
Sample Date	**Units**	08/17/23	08/17/23	08/17/23	08/16/23	08/14/23
Aroclor 1016	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1221	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1232	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1242	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1248	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1254	mg/kg	0.1 U	0.1 U	0.1 U	50	21 J
Aroclor 1260	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1262	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U
Aroclor 1268	mg/kg	0.1 U	0.1 U	0.1 U	3.9 U	3.8 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3268-16	23H3268-17	23H3268-18	23H3268-19	23H3268-20
Field Sample ID		P-FD-02	P-FD-03	P-FD-04	P-FD-05	P-FD-06
Sample Type		FD	FD	FD	FD	FD
Parent Sample ID		P-040-R09W	P-065-S01C	P-111-R28SC	P-127-R33NC	P-133-R16EP
Sample Date	**Units**	08/14/23	08/14/23	08/14/23	08/15/23	08/15/23
Aroclor 1016	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U
Aroclor 1221	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U
Aroclor 1232	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U
Aroclor 1242	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U
Aroclor 1248	mg/kg	3.7 U	68 J	4.7	21 U	0.4 U
Aroclor 1254	mg/kg	19	44	5.6	340	5.6
Aroclor 1260	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U
Aroclor 1262	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U
Aroclor 1268	mg/kg	3.7 U	4.8 U	0.38 U	21 U	0.4 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3268

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-266-R17EC2 and P-FD-01	Dual column imprecision.	J	
	Aroclor 1248	P-FD-03	Dual column and field duplicate imprecision.	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 10/03/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3268
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Fourteen (14) building material samples and six (6) field duplicate samples were listed on the COC for SDG 23H3268. The samples were collected on 08/14/2023 through 08/17/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-261-R34S	23H3268-01	PCBs
P-262-EX	23H3268-02	PCBs
P-263-EX	23H3268-03	PCBs
P-264-EX	23H3268-04	PCBs
P-265-R17EC1	23H3268-05	PCBs
P-266-R17EC2	23H3268-06	PCBs
P-267-R17EC3	23H3268-07	PCBs
P-268-R17EC4	23H3268-08	PCBs
P-269-R23SS	23H3268-09	PCBs
P-270-R27SS	23H3268-10	PCBs
P-271-R25ASS	23H3268-11	PCBs
P-272-R21SS	23H3268-12	PCBs
P-273-R31SS	23H3268-13	PCBs
P-274-S12R	23H3268-14	PCBs
P-FD-01	23H3268-15	PCBs
P-FD-02	23H3268-16	PCBs
P-FD-03	23H3268-17	PCBs
P-FD-04	23H3268-18	PCBs
P-FD-05	23H3268-19	PCBs
P-FD-06	23H3268-20	PCBs

A complete laboratory report was received for SDG 23H3268.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/10 to 1/50. Surrogates were diluted out of samples that had sample dilutions > 1/20. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pairs associated with the samples met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on samples P-264-EX (23H3268-04) and P-270-R27SS (23H3268-10).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses of sample P-264-EX on both analytical columns. RPDs met the < 30% limit, as specified in the Program QAPP, for Aroclor 1016 recoveries; RPDs for the Aroclor 1260 recoveries exceeded 30%. The laboratory indicated the percent recoveries were high due to the contribution of other Aroclors (i.e., Aroclor 1254) in the parent sample. No action is taken.

Percent recoveries of Aroclors 1016 and 1260 were within the Program QAPP limits of 40-140% in the MS and MSD analyses of samples P-270-R27SS on both analytical columns. RPDs met the < 30% limit, as specified in the Program QAPP. No actions are required.

9. **Laboratory Duplicates**

PCBs: Not applicable to this analysis.

10. Serial Dilution (metals only)

PCBs: Not applicable to this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-263-EX / P-FD-09 (23H3268-03 / 23H3270-03)
- P-269-R23SS / P-FD-15 (23H3268-09 / 23H3270-09)

PCBs: Aroclor results met field duplicate precision criteria and no action is required.

In addition, the following field duplicate samples, evaluated in other SDGs, are associated with the samples of this SDG:

- P-FD-01 / P-018-R06E (23H3268-15 / 23H3248-18) – evaluated in SDG 23H3248. Field duplicate precision met and no actions required.
- P-FD-02 / P-040-R09W (23H3268-16 / 23H3250-20) – evaluated in SDG 23H3250. Field duplicate precision met and no actions required.
- P-FD-03 / P-065-S01C (23H3268-17 / 23H3255-05) – evaluated in SDG 23H3255. Results for Aroclors 1248 and 1254 qualified as estimated (J/UJ) in samples P-065-S01C and P-066-S01C (located in SDG 23H3255), and FD-03 (located in this SDG), due to field duplicate imprecision.
- P-FD-04 / P-111-R28SC (23H3268-18 / 23H3257-11) – evaluated in SDG 23H3257. Field duplicate precision met and no actions required.
- P-FD-05 / P-127-R33NC (23H3268-19 / 23H3258-07) – evaluated in SDG 23H3258. Field duplicate precision met and no actions required.
- P-FD-06 / P-133-R16EP (23H3268-20 / 23H3258-13) – evaluated in SDG 23H3258. Field duplicate precision met and no actions are required.

Field duplicate precision evaluations for the field duplicate pairs above are included in the attachments of this data validation report.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per the NFGs) were met for all Aroclor detections > QL except for the Aroclor 1254 detections in samples P-266-R17EC2 (23H3268-06) and P-FD-01 (23H3268-15), and the Aroclor 1248 detection in sample P-FD-03 (23H3268-17), where RPDs were > 25%. Based on the NFGs (2020), the detected results for Aroclor 1254 are qualified as

estimated (J) in samples P-266-R17EC2 and P-FD-01, and the Aroclor 1248 detection in sample P-FD-03 was qualified as estimated (J) due to dual column imprecision. Note that result for Aroclor 1248 in sample P-FD-03 is also qualified as estimated (J) due to field duplicate imprecision, as previously discussed above.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/10 to 1/50.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3248 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-018-R06E**		**P-FD-01**				
	23H3248-18		**23H3268-15**				
Aroclor 1016	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1221	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1232	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1242	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1248	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1254	23		21		-9.09	-2.00	Ok - abs diff < 4x RL
Aroclor 1260	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1262	4.7	U	3.8	U	-21.18		Ok - both ND
Aroclor 1268	4.7	U	3.8	U	-21.18		Ok - both ND

Note that P-018-R06E is located in SDG 23H3248.

Field Duplicate Evaluation

SDG: 23H3250 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-040-R09W**		**P-FD-02**				
	23H3250-20		**23H3268-16**				
Aroclor 1016	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1221	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1232	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1242	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1248	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1254	16		19		17.14	3.00	Ok - abs diff < 4x QL
Aroclor 1260	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1262	4.4	U	3.7	U	-17.28		Ok - both ND
Aroclor 1268	4.4	U	3.7	U	-17.28		Ok - both ND

Note that P-040-R09W is located in SDG 23H3250.

Field Duplicate Evaluation

SDG: 23H3255 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment[1]
Sample ID	**P-065-S01C**		**P-FD-03**				
	23H3255-05		**23H3268-17**				
Aroclor 1016	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1221	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1232	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1242	4	U	4.8	U	18.18		Ok- both ND
Aroclor 1248	4	U	68		177.78	64	**J/UJ - abs diff > 4x RL**
Aroclor 1254	81		44		-59.20		**J/UJ - RPD > 50%**
Aroclor 1260	4	U	4.8	U	18.18		Ok - both ND
Aroclor 1262	4	U	4.8	U	18.18		Ok - both ND
Aroclor 1268	4	U	4.8	U	18.18		Ok - both ND

[1] Professional judgement used to qualify "S01C" samples only (P-065-S01C and P-066-S01C).
Note that P-065-SO1C is located in SDG 23H3255.

Field Duplicate Evaluation

SDG: 23H3257 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-111-R28SC**		**P-FD-04**				
	23H3257-11		**23H3268-18**				
Aroclor 1016	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1221	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1232	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1242	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1248	4.8	U	4.7		-2.11	-0.10	Ok - abs diff < 4x RL
Aroclor 1254	19		5.6		-108.94	-13.40	Ok - abs diff < 4x RL
Aroclor 1260	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1262	4.8	U	0.38	U	-170.66		Ok - both ND
Aroclor 1268	4.8	U	0.38	U	-170.66		Ok - both ND

Note that P-111-R28SC is located in SDG 23H3257.

Field Duplicate Evaluation

SDG: 23H3258 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-127-R33NC**		**P-FD-05**				
	23H3258-07		**23H3268-19**				
Aroclor 1016	22	U	21	U	-4.65		Ok - both ND
Aroclor 1221	22	U	21	U	-4.65		Ok - both ND
Aroclor 1232	22	U	21	U	-4.65		Ok - both ND
Aroclor 1242	22	U	21	U	-4.65		Ok - both ND
Aroclor 1248	22	U	21	U	-4.65		Ok - both ND
Aroclor 1254	310		340		9.23		Ok - RPD < 50%
Aroclor 1260	22	U	21	U	-4.65		Ok - both ND
Aroclor 1262	22	U	21	U	-4.65		Ok - both ND
Aroclor 1268	22	U	21	U	-4.65		Ok - both ND

Note that P-127-R33NC is located in SDG 23H3258.

Field Duplicate Evaluation

SDG: 23H3258 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-133-R16EP**		**P-FD-06**				
	23H3258-13		**23H3268-20**				
Aroclor 1016	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1221	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1232	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1242	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1248	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1254	5.5		5.6		1.80		Ok - RPD < 50%
Aroclor 1260	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1262	0.46	U	0.4	U	-13.95		Ok - both ND
Aroclor 1268	0.46	U	0.4	U	-13.95		Ok - both ND

Note that P-133-R16EP is located in SDG 23H3258.

Field Duplicate Evaluation

SDG: 23H3268 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-263-EX**		**P-FD-09**				
	23H3268-03		**23H3270-03**				
Aroclor 1016	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1221	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1232	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1242	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1248	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1254	160		140		-13.33		Ok - RPD < 50%
Aroclor 1260	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1262	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1268	8.7	U	7.7	U	-12.20		Ok - both ND

Note that P-FD-09 is located in SDG 23H3270.

Field Duplicate Evaluation

SDG: 23H3268 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-269-R23SS**		**P-FD-15**				
	23H3268-09		**23H3270-09**				
Aroclor 1016	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1221	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1232	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1242	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1248	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1254	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1260	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1262	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1268	0.1	U	0.1	U	0.00		Ok - both ND

Note that P-FD-15 is located in SDG 23H3270.

23H3268

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-261-R34S	8/16/2023	9:47	GRAB	O	U		1				x
2	P-262-Ex	8/16/2023	9:48	GRAB	O	U		1				x
3	P-263-Ex	8/16/2023	9:49	GRAB	O	U		1				x
4	P-264-Ex	8/16/2023	9:50	GRAB	O	U		3				x
5	P-265-R17EC1	8/16/2023	9:51	GRAB	O	U		1				x
6	P-266-R17EC2	8/16/2023	9:52	GRAB	O	U		1				x
7	P-267-R17EC3	8/16/2023	9:53	GRAB	O	U		1				x
8	P-268-R17EC4	8/16/2023	9:54	GRAB	O	U		1				x
9	P-269-R23SS	8/17/2023	9:55	GRAB	O	U		1				x
10	P-270-R27SS	8/17/2023	10:20	GRAB	O	U		3				x

Relinquished by: (signature)	Date/Time: 8-22-23 1258
Received by: (signature)	Date/Time: 1258 8-22-23
Relinquished by: (signature)	Date/Time: 1746 8-22-23
Received by: (signature) 38,22,3.9	Date/Time: 8/22/23
Relinquished by: (signature) 2.6,5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23H3268

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-271-R25ASS	8/17/2023	10:45	GRAB	O	U		1				x
12	P-272-R21SS	8/17/2023	11:20	GRAB	O	U		1				x
13	P-273-R31SS	8/17/2023	11:45	GRAB	O	U		1				x
14	P-274-S12R	8/16/2023	9:55	GRAB	O	U		1				x
15	p-FD-01	8/14/2023	8:00	GRAB	O	U		1				x
16	p-FD-02	8/14/2023	8:01	GRAB	O	U		1				x
17	p-FD-03	8/14/2023	8:02	GRAB	O	U		1				x
18	p-FD-04	8/14/2023	8:03	GRAB	O	U		1				x
19	p-FD-05	8/15/2023	8:00	GRAB	O	U		1				x
20	p-FD-06	8/15/2023	8:01	GRAB	O	U		1				x

[3] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 8.22.23 1255	Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS
Received by: (signature)	Date/Time: 8-22-23 1255	
Relinquished by: (signature)	Date/Time: 8-22-23 1746	
Received by: (signature) 3.8 22, 39	Date/Time: 8/22/23	
Relinquished by: (signature) 2.6 5.6	Date/Time: 1746	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

November 6, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23H3270
Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

9/Building Material Samples: P-FD-07, P-FD-08, P-FD-09, P-FD-10, P-FD-11, P-FD-12, P-FD-13, P-FD-14, P-FD-15
9/Field Duplicate Pairs: P-146-EWP2 / P-FD-07 (23H3259-06 / 23H3270-01), P-158-R11EDW / P-FD-08 (23H3259-18 / 23H3270-02), P-263-EX / P-FD-09 (23H3268-03 / 23H3270-03), P-176-EX / P-FD-10 (23H3260-16 / 23H3270-04), P-131-R37S / P-FD-11 (23H3258-11 / 23H3270 - 05), P-003-R03W / P-FD-12 (23H3248-03 / 23H3270-06), P-009-R04W / P-FD-13 (23H3248-09 / 23H3270-07), P-252-R17S / P-FD-14 (23H3267-12 / 23H3270-08), P-269-R23SS / P-FD-15 (23H3268-09 / 23H3270-09)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on August 14 through August 17, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for St. Johnsbury Armory, which appends the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

* • Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Preservation and Technical Holding Times
* • Blanks

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in several samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column and field duplicate imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist

Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23H3270-01	23H3270-02	23H3270-03	23H3270-04	23H3270-05
Field Sample ID		P-FD-07	P-FD-08	P-FD-09	P-FD-10	P-FD-11
Sample Type		FD	FD	FD	FD	FD
Parent Sample ID		P-146-EWP2	P-158-R11EDW	P-263-EX	P-176-EX	P-131-R37S
Sample Date	**Units**	08/15/23	08/16/23	08/16/23	08/16/23	08/15/23
Aroclor 1016	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U
Aroclor 1221	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U
Aroclor 1232	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U
Aroclor 1242	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U
Aroclor 1248	mg/kg	0.4 U	3.1 J	7.7 U	0.35 U	22 U
Aroclor 1254	mg/kg	4.9	2.7	140	0.56	210
Aroclor 1260	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U
Aroclor 1262	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U
Aroclor 1268	mg/kg	0.4 U	0.44 U	7.7 U	0.35 U	22 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material			
Lab Sample ID		23H3270-06	23H3270-07	23H3270-08	23H3270-09
Field Sample ID		P-FD-12	P-FD-13	P-FD-14	P-FD-15
Sample Type		FD	FD	FD	FD
Parent Sample ID		P-003-R03W	P-009-R04W	P-252-R17S	P-269-R23SS
Sample Date	**Units**	08/14/23	08/14/23	08/16/23	08/17/23
Aroclor 1016	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1221	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1232	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1242	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1248	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1254	mg/kg	41	23 J	6.1	0.1 U
Aroclor 1260	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1262	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U
Aroclor 1268	mg/kg	4.1 U	4.7 U	1.8 U	0.1 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23H3270

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1248	P-FD-08	Field duplicate imprecision.	J	
	Aroclor 1254	P-FD-07	Dual column imprecision.	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 10/03/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23H3270
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Nine (9) field duplicate samples were listed on the COC for SDG 23H3270. The samples were collected on 08/14/2023 through 08/17/2023 and were received at the laboratory on 08/22/2023 at temperatures ranging from 2.2 to 5.6 °C.

Sample ID	Laboratory ID	Analyses
P-FD-07	23H3270-01	PCBs
P-FD-08	23H3270-02	PCBs
P-FD-09	23H3270-03	PCBs
P-FD-10	23H3270-04	PCBs
P-FD-11	23H3270-05	PCBs
P-FD-12	23H3270-06	PCBs
P-FD-13	23H3270-07	PCBs
P-FD-14	23H3270-08	PCBs
P-FD-15	23H3270-09	PCBs

A complete laboratory report was received for SDG 23H3270.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

5. **Interference Check Sample (metals only)**

   Not assessed for S2AVM.

6. **Surrogates (PCBs only)**

   PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except where required sample dilutions caused the surrogates to dilute out of the samples. Dilution factors ranged from 1/4 to 1/50. Surrogates were diluted out of samples that had sample dilutions > 1/20. No actions are required.

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pairs associated with the samples met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

   If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
   If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

   MS/MSD analyses were not performed on samples of this SDG. No action is required.

9. **Laboratory Duplicates**

   PCBs: Not applicable to this analysis.

10. **Serial Dilution (metals only)**

    PCBs: Not applicable to this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    The following field duplicate pairs, evaluated in other SDGS, are associated with the samples of this site.

    - P-146-EWP2 / P-FD-07 (23H3259-06 / 23H3270-01) – evaluated in SDG 23H3259. Field duplicate precision met and no actions required.
    - P-158-R11EDW / P-FD-08 (23H3259-18 / 23H3270-02) – evaluated in SDG 23H3259. Aroclor 1248 results qualified as estimated (J/UJ) in the field duplicate pair samples due to field duplicate imprecision.
    - P-263-EX / P-FD-09 (23H3268-03 / 23H3270-03) – evaluated in SDG 23H3268. Field duplicate criteria met and no actions required.

- P-176-EX / P-FD-10 (23H3260-16 / 23H3270-04) – evaluated in SDG 23H3260. Field duplicate precision met and no actions required.
- P-131-R37S / P-FD-11 (23H3258-11 / 23H3270 -05) – evaluated in SDG 23H3258. Field duplicate criteria met and no actions required.
- P-003-R03W / P-FD-12 (23H3248-03 / 23H3270-06) – evaluated in SDG 23H3248. Field duplicate precision met and no actions required.
- P-009-R04W / P-FD-13 (23H3248-09 / 23H3270-07) – evaluated in SDG 23H3248. Field duplicate precision met and no actions required.
- P-252-R17S / P-FD-14 (23H3267-12 / 23H3270-08) – evaluated in SDG 23H3267. Field duplicate precision met and no actions are required.
- P-269-R23SS / P-FD-15 (23H3268-09 / 23H3270-09) – evaluated in SDG 23H3268. Field duplicate precision met and no actions are required.

Field duplicate precision evaluations for the field duplicate pairs above are included in the attachments of this data validation report.

12. Internal Standards

Not applicable to these analyses.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per the NFGs) were met for all Aroclor detections > QL except for the Aroclor 1254 detection in sample P-FD-013 (23H3270-07), where the RPD was > 25% (30%). Based on the NFGs (2020), the detected result for Aroclor 1254 in sample P-FD-13 is qualified as estimated (J) due to dual column imprecision. Note that result for Aroclor 1248 in sample P-FD-03 is also qualified as estimated (J) due to field duplicate imprecision, as previously discussed above.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for several samples due to required sample dilutions. Dilutions ranged from 1/4 to 1/50.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23H3259 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-146-EWP2**		**P-FD-07**				
	23H3259-06		**23H3270-01**				
Aroclor 1016	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1221	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1232	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1242	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1248	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1254	4.9		5.8		16.82		Ok - RPD < 50%
Aroclor 1260	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1262	0.4	U	1	U	85.71		Ok - both ND
Aroclor 1268	0.4	U	1	U	85.71		Ok - both ND

Note that P-146-EWP2 is located in SDG 23H3259.

Field Duplicate Evaluation

SDG: 23H3259 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment[1]
Sample ID	**P-158-R11EDW**		**P-FD-08**				
	23H3259-18		**23H3270-02**				
Aroclor 1016	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1221	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1232	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1242	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1248	0.5	U	3.1		144.44	2.60	**J/UJ - abs diff > 4x RL**
Aroclor 1254	2.7		2.7		0.00		Ok - RPD < 50%
Aroclor 1260	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1262	0.5	U	0.44	U	-12.77		Ok - both ND
Aroclor 1268	0.5	U	0.44	U	-12.77		Ok - both ND

[1] Professional judgement used to apply actions to the field duplicate pair only.
Note that P-158-R11EDW is located in SDG 23H3259.

Field Duplicate Evaluation

SDG: 23H3268 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-263-EX**		**P-FD-09**				
	23H3268-03		**23H3270-03**				
Aroclor 1016	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1221	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1232	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1242	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1248	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1254	160		140		-13.33		Ok - RPD < 50%
Aroclor 1260	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1262	8.7	U	7.7	U	-12.20		Ok - both ND
Aroclor 1268	8.7	U	7.7	U	-12.20		Ok - both ND

Note that P-263-EX is located in SDG 23H3268.

Field Duplicate Evaluation

SDG: 23H3268 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-269-R23SS**		**P-FD-15**				
	23H3268-09		**23H3270-09**				
Aroclor 1016	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1221	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1232	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1242	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1248	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1254	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1260	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1262	0.1	U	0.1	U	0.00		Ok - both ND
Aroclor 1268	0.1	U	0.1	U	0.00		Ok - both ND

Note that P-269-R23SS is located in SDG 23H3268.

Field Duplicate Evaluation

SDG: 23H3260 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-176-EX**		**P-FD-10**				
	23H3260-16		**23H3270-04**				
Aroclor 1016	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1221	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1232	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1242	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1248	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1254	0.62		0.56		-10.17	-0.06	Ok - abs diff < 4x RL
Aroclor 1260	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1262	0.47	U	0.35	U	-29.27		Ok - both ND
Aroclor 1268	0.47	U	0.35	U	-29.27		Ok - both ND

Note that P-176-EX is located in SDG 23H3260.

Field Duplicate Evaluation

SDG: 23H3258 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-131-R37S**		**P-FD-11**				
	23H3258-11		**23H3270-05**				
Aroclor 1016	24	U	22	U	-8.70		Ok - both ND
Aroclor 1221	24	U	22	U	-8.70		Ok - both ND
Aroclor 1232	24	U	22	U	-8.70		Ok - both ND
Aroclor 1242	24	U	22	U	-8.70		Ok - both ND
Aroclor 1248	24	U	22	U	-8.70		Ok - both ND
Aroclor 1254	270		210		-25.00		Ok - RPD < 50%
Aroclor 1260	24	U	22	U	-8.70		Ok - both ND
Aroclor 1262	24	U	22	U	-8.70		Ok - both ND
Aroclor 1268	24	U	22	U	-8.70		Ok - both ND

Note that P-131-R37S is located in SDG 23H3258.

Field Duplicate Evaluation

SDG: 23H3248 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-003-R03W**		**P-FD-12**				
	23H3248-03		**23H3270-06**				
Aroclor 1016	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1221	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1232	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1242	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1248	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1254	43		41		-4.76		Ok - RPD < 50%
Aroclor 1260	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1262	4.2	U	4.1	U	-2.41		Ok - both ND
Aroclor 1268	4.2	U	4.1	U	-2.41		Ok - both ND

Note that P-003-R03W is located in SDG 23H3248.

Field Duplicate Evaluation

SDG: 23H3248 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-009-R04W**		**P-FD-13**				
	23H3248-09		**23H3270-07**				
Aroclor 1016	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1221	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1232	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1242	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1248	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1254	24		23		-4.26		Ok - RPD < 50%
Aroclor 1260	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1262	4.4	U	4.7	U	6.59		Ok - both ND
Aroclor 1268	4.4	U	4.7	U	6.59		Ok - both ND

Note that P-009-R04W is located in SDG 23H3248.

Field Duplicate Evaluation

SDG: 23H3267 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-252-R17S**		**P-FD-14**				
	23H3267-12		**23H3270-08**				
Aroclor 1016	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1221	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1232	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1242	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1248	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1254	12		6.1		-65.19	-5.90	Ok - abs diff < 4x RL
Aroclor 1260	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1262	1.9	U	1.8	U	-5.41		Ok - both ND
Aroclor 1268	1.9	U	1.8	U	-5.41		Ok - both ND

Note that P-252-R17S is located in SDG 23H3267.

23H3270

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	Bridget Fortier (bfortier@nobis-group.com)

Requested Turnaround Time

7-Day ☑ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	p-FD-07	8/15/2023	8:02	GRAB	O	U		1				x
2	p-FD-08	8/16/2023	16:00	GRAB	O	U		1				x
3	p-FD-09	8/16/2023	16:01	GRAB	O	U		1				x
4	p-FD-010	8/16/2023	16:02	GRAB	O	U		1				x
5	p-FD-011	8/15/2023	16:03	GRAB	O	U		1				x
6	p-FD-012	8/14/2023	16:01	GRAB	O	U		1				x
7	p-FD-013	8/14/2023	16:00	GRAB	O	U		1				x
8	p-FD-014	8/16/2023	16:04	GRAB	O	U		1				x
9	p-FD-015	8/17/2023	8:00	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: RST 8-22-23
Received by: (signature)	Date/Time: 1255 8-22-23
Relinquished by: (signature)	Date/Time: 1746 8-22-23
Received by: (signature) 3.8, 2.2, 3.9	Date/Time: 8/22/23
Relinquished by: (signature) 1.6, 5.6	Date/Time: 1746
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: MS/MSDs: P-019-R06S, P-043-R09WT, P-257-S12S, P-258-R11WDW, P-259-R15E, P-151-EP1, P-136-GN, P-069-R22EC, P-081-R22SB, P-114-R28WB, P-237-R33NB, P-177-Ex, P-264-Ex, P-189-Ex, P-270-R27SS

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

RF

Table of Contents

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23J0273

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

9/Caulk Samples: P-275-EX, P-276-EX, P-277-EX, P-278-EX, P-279-EX, P-280-EX, P-281-EX, P-282-EX, P-283-EX
11/Building Material Samples: P-284-R6, P-285-R6, P-286-R10, P-287-R13, P-288-R13, P-289-R14, P-290-R12, P-291-R12, P-292-R12, P-293-R18, P-294-R18
2/Field Duplicate Pairs: P-286-R10 / P-FD-016 (23J0273-12 / 23J0277-05) and P-289-R14 / P-FD-017 (23J0273-15 / 23J0277-06)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on October 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

* • Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Preservation and Technical Holding Times
* • Blanks

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in 3 building material samples and 2 caulk samples due to required sample dilutions.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist

Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23J0273-10	23J0273-11	23J0273-12	23J0273-13	23J0273-14
Field Sample ID		P-284-R6	P-285-R6	P-286-R10	P-287-R13	P-288-R13
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	10/02/23	10/02/23	10/02/23	10/02/23	10/02/23
Aroclor 1016	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1221	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1232	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1242	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1248	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1254	mg/kg	2.6	2.2 J	1.6	4.3	2.2
Aroclor 1260	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1262	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U
Aroclor 1268	mg/kg	0.89 U	0.98 U	0.9 U	0.96 U	0.88 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23J0273-15	23J0273-16	23J0273-17	23J0273-18	23J0273-19
Field Sample ID		P-289-R14	P-290-R12	P-291-R12	P-292-R12	P-293-R18
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	10/02/23	10/02/23	10/02/23	10/02/23	10/02/23
Aroclor 1016	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1221	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1232	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1242	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1248	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1254	mg/kg	11	3.3	2.7	3.4	5700
Aroclor 1260	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1262	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U
Aroclor 1268	mg/kg	2 U	0.93 U	0.74 U	0.97 U	970 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material
Lab Sample ID		23J0273-20
Field Sample ID		P-294-R18
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	10/02/23
Aroclor 1016	mg/kg	800 U
Aroclor 1221	mg/kg	800 U
Aroclor 1232	mg/kg	800 U
Aroclor 1242	mg/kg	800 U
Aroclor 1248	mg/kg	800 U
Aroclor 1254	mg/kg	4600
Aroclor 1260	mg/kg	800 U
Aroclor 1262	mg/kg	800 U
Aroclor 1268	mg/kg	800 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Caulk				
Lab Sample ID		23J0273-01	23J0273-02	23J0273-03	23J0273-04	23J0273-05
Field Sample ID		P-275-EX	P-276-EX	P-277-EX	P-278-EX	P-279-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	10/02/23	10/02/23	10/02/23	10/02/23	10/02/23
Aroclor 1016	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1221	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1232	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1242	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1248	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1254	mg/kg	5.9	17	10	1.4	1.6
Aroclor 1260	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1262	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U
Aroclor 1268	mg/kg	0.7 U	3.6 U	3.7 U	0.77 U	0.76 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Caulk			
Lab Sample ID		23J0273-06RE1	23J0273-07	23J0273-08	23J0273-09
Field Sample ID		P-280-EX	P-281-EX	P-282-EX	P-283-EX
Sample Type		N	N	N	N
Parent Sample ID					
Sample Date	**Units**	10/02/23	10/02/23	10/02/23	10/02/23
Aroclor 1016	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1221	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1232	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1242	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1248	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1254	mg/kg	0.78 U	0.75 U	0.8	0.71 U
Aroclor 1260	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1262	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U
Aroclor 1268	mg/kg	0.78 U	0.75 U	0.73 U	0.71 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23J0273

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-285-R6	Dual column imprecision	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/13/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23J0273
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Nine (9) caulk samples and eleven (11) building material samples were listed on the COC for SDG 23J0273. The samples were collected on 10/02/2023 and were received at the laboratory on 10/03/2023 at 3.2 °C.

Sample ID	Matrix	Laboratory ID	Analyses
P-275-EX	Caulk	23J0273-01	PCBs
P-276-EX	Caulk	23J0273-02	PCBs
P-277-EX	Caulk	23J0273-03	PCBs
P-278-EX	Caulk	23J0273-04	PCBs
P-279-EX	Caulk	23J0273-05	PCBs
P-280-EX	Caulk	23J0273-06	PCBs
P-281-EX	Caulk	23J0273-07	PCBs
P-282-EX	Caulk	23J0273-08	PCBs
P-283-EX	Caulk	23J0273-09	PCBs
P-284-R6	Building Material	23J0273-10	PCBs
P-285-R6	Building Material	23J0273-11	PCBs
P-286-R10	Building Material	23J0273-12	PCBs
P-287-R13	Building Material	23J0273-13	PCBs
P-288-R13	Building Material	23J0273-14	PCBs
P-289-R14	Building Material	23J0273-15	PCBs
P-290-R12	Building Material	23J0273-16	PCBs
P-291-R12	Building Material	23J0273-17	PCBs
P-292-R12	Building Material	23J0273-18	PCBs
P-293-R18	Building Material	23J0273-19	PCBs
P-294-R18	Building Material	23J0273-20	PCBs

A complete laboratory report was received for SDG 23J0273.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material and caulk samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blanks associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except samples P-293-R18 (23J0273-19) and P-294-R18 (23J0273-20), where the surrogates diluted out due to the high dilutions required (1/10,000) to report the high concentrations of Aroclor 1254 detected in the samples. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in all PCB LCS/LCSD pairs met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-286-R10 / P-FD-016 (23J0273-12 / 23J0277-05)
- P-289-R14 / P-FD-017 (23J0273-15 / 23J0277-06)

PCBs: Field duplicate precision criteria were met for both field duplicate pairs. No actions are required.

12. Internal Standards

Not applicable for this analysis.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for all Aroclor detections except for the Aroclor 1254 detection in sample P-285-R6 (23J0273-11), where the RPD was 25.6%. Based on the NFGs (2020), the detected Aroclor 1254 result in sample P-285-R6 is qualified as estimated (J) due to dual column imprecision.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for 3 building material and 2 caulk samples due to required sample dilutions. Dilutions ranged from 1/20 to 1/10,000. Site objectives may be impacted.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material and caulk samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23J0273 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-286-R10**		**P-FD-016**				
	23J0273-12		**23J0277-05**				
Aroclor 1016	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1221	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1232	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1242	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1248	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1254	1.6		1.9		17.14	0.30	Ok - abs diff < 4x QL
Aroclor 1260	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1262	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1268	0.90	U	0.97	U	7.49		Ok - both ND
Dilution Factor:	10		10				

Note that P-FD-016 is located in SDG 23J0277.

Field Duplicate Evaluation

SDG: 23J0273 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-289-R14**		**P-FD-017**				
	23J0273-15		**23J0277-06**				
Aroclor 1016	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1221	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1232	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1242	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1248	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1254	11		9.3		-16.75	-1.70	Ok - abs diff < 4x QL
Aroclor 1260	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1262	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1268	2	U	0.96	U	-70.27		Ok - both ND
Dilution Factor:	20		10				

Note that P-FD-017 is located in SDG 23J0277.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23J0273
RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number:	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-275-Ex	10/2/2023	13:25	GRAB	O	U		1				x
2	P-276-Ex	10/2/2023	13:19	GRAB	O	U		1				x
3	P-277-Ex	10/2/2023	13:15	GRAB	O	U		1				x
4	P-278-Ex	10/2/2023	12:34	GRAB	O	U		1				x
5	P-279-Ex	10/2/2023	12:29	GRAB	O	U		1				x
6	P-280-Ex	10/2/2023	12:23	GRAB	O	U		1				x
7	P-281-Ex	10/2/2023	12:06	GRAB	O	U		1				x
8	P-282-Ex	10/2/2023	12:04	GRAB	O	U		1				x
9	P-283-Ex	10/2/2023	12:03	GRAB	O	U		1				x
10	P-284-R6	10/2/2023	11:32	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) John Maddigan	Date/Time: 10/2/23 14:18
Received by: (signature) 3.2°C	Date/Time: 10-3-23 0940
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. Th Chain of Custody is a legal document that must be complete and accurate and is used to determine wh analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pa Analytical values your partnership on each project and will try to assist with missing information, but w not be held accountable.

Table of Contents

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-285-R6	10/2/2023	11:28	GRAB	O	U		1				x
12	P-286-R10	10/2/2023	11:25	GRAB	O	U		1				x
13	P-287-R13	10/2/2023	11:14	GRAB	O	U		1				x
14	P-288-R13	10/2/2023	11:12	GRAB	O	U		1				x
15	P-289-R14	10/2/2023	11:10	GRAB	O	U		1				x
16	P-290-R12	10/2/2023	11:03	GRAB	O	U		1				x
17	P-291-R12	10/2/2023	11:01	GRAB	O	U		1				x
18	P-292-R12	10/2/2023	10:58	GRAB	O	U		1				x
19	P-293-R18	10/2/2023	10:53	GRAB	O	U		1				x
20	P-294-R18	10/2/2023	10:49	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) John Maddigan	Date/Time: 10/2/23 14:18
Received by: (signature) 3.2°C	Date/Time: 10.3.23 0940
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. Th Chain of Custody is a legal document that must be complete and accurate and is used to determine wh analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pa Analytical values your partnership on each project and will try to assist with missing information, but w not be held accountable.

Table of Contents

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23J0277

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

6/Building Material Samples: P-295-R18, P-296-R15, P-297-R15, P-298-R15, P-FD-016, P-FD-017
2/Field Duplicate Pairs: P-286-R10 / P-FD-016 (23J0273-12 / 23J0277-05) and P-289-R14 / P-FD-017 (23J0273-15 / 23J0277-06)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on October 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards
*	• Matrix Spike Analysis

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that quantitation limits for non-detect results exceeded the project action limit (PAL) of ≤ 1 mg/kg for total PCBs in 1 building material sample due to the required sample dilution.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified due to dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23J0277-01	23J0277-02	23J0277-03	23J0277-04	23J0277-05
Field Sample ID		P-295-R18	P-296-R15	P-297-R15	P-298-R15	P-FD-016
Sample Type		N	N	N	N	FD
Parent Sample ID						P-286-R10
Sample Date	**Units**	10/02/23	10/02/23	10/02/23	10/02/23	10/02/23
Aroclor 1016	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1221	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1232	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1242	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1248	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1254	mg/kg	6800	7.6	13	12	1.9
Aroclor 1260	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1262	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U
Aroclor 1268	mg/kg	960 U	0.93 U	0.93 U	0.9 U	0.97 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material
Lab Sample ID		23J0277-06
Field Sample ID		P-FD-017
Sample Type		FD
Parent Sample ID		P-289-R14
Sample Date	**Units**	10/02/23
Aroclor 1016	mg/kg	0.96 U
Aroclor 1221	mg/kg	0.96 U
Aroclor 1232	mg/kg	0.96 U
Aroclor 1242	mg/kg	0.96 U
Aroclor 1248	mg/kg	0.96 U
Aroclor 1254	mg/kg	9.3 J
Aroclor 1260	mg/kg	0.96 U
Aroclor 1262	mg/kg	0.96 U
Aroclor 1268	mg/kg	0.96 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23J0277

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-FD-017	Dual column imprecision	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/13/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23J0277
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Six (6) building material samples, including 2 field duplicate samples, were listed on the COC for SDG 23J0277. The samples were collected on 10/02/2023 and were received at the laboratory on 10/03/2023 at 3.2 °C.

Sample ID	Laboratory ID	Analyses
P-295-R18	23J0277-01	PCBs
P-296-R15	23J0277-02	PCBs
P-297-R15	23J0277-03	PCBs
P-298-R15	23J0277-04	PCBs
P-FD-016	23J0277-05	PCBs
P-FD-017	23J0277-06	PCBs

A complete laboratory report was received for SDG 23J0277.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples except sample P-295-R18 (23J0277-1), where the surrogates diluted out due to the high dilution required (1/10,000) to report the high concentrations of Aroclor 1254 detected in the sample. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-296-R15 (23J0277-2).

Percent recoveries of Aroclors 1016 and 1260 exceeded the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. Professional judgement based on the NFGs (2020) and the EPA Region 1 Supplement (2020) was used to accept the non-detect results for Aroclors 1016, 1221, 1232, and 1242 unqualified since the potential bias is high. The recoveries of Aroclor 1260 likely exceeded the 40-140% limits in the MS/MSD analyses due to the presence of high concentrations of Aroclor 1254 detected in the parent sample. Therefore, no action is taken for the exceeded MS/MSD criteria. The RPDs were ≤ 30%, as specified in the Program QAPP.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-286-R10 / P-FD-016 (23J0273-12 / 23J0277-05)
- P-289-R14 / P-FD-017 (23J0273-15 / 23J0277-06)

PCBs: Field duplicate precision criteria were met for both field duplicate pairs. No actions are required.

12. Internal Standards

Not applicable for this analysis.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for all Aroclor detections except for the Aroclor 1254 detection in sample P-FD-017 (23J0277-06), where the RPD was 28.2%. Based on the NFGs, the detected Aroclor 1254 result in sample P-FD-017 is qualified as estimated (J) due to dual column imprecision.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results exceeded the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA, for 1 sample due to the required sample dilution of 1/10,000. Site objectives may be impacted.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23J0277 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-286-R10**		**P-FD-016**				
	23J0273-12		**23J0277-05**				
Aroclor 1016	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1221	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1232	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1242	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1248	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1254	1.6		1.9		17.14	0.30	Ok - abs diff < 4x QL
Aroclor 1260	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1262	0.90	U	0.97	U	7.49		Ok - both ND
Aroclor 1268	0.90	U	0.97	U	7.49		Ok - both ND
Dilution Factor:	10		10				

Note that P-286-R10 is located in SDG 23J0273.

Field Duplicate Evaluation

SDG: 23J0277 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-289-R14**		**P-FD-017**				
	23J0273-15		**23J0277-06**				
Aroclor 1016	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1221	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1232	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1242	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1248	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1254	11		9.3		-16.75	-1.70	Ok - abs diff < 4x QL
Aroclor 1260	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1262	2	U	0.96	U	-70.27		Ok - both ND
Aroclor 1268	2	U	0.96	U	-70.27		Ok - both ND
Dilution Factor:	20		10				

Note that P-289-R14 is located in SDG 23J0273.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23J0277
RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code[1]	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-295-R18	10/2/2023	10:47	GRAB	O	U		1				x
2	P-296-R15	10/2/2023	10:37	GRAB	O	U		1				x
3	P-297-R15	10/2/2023	10:34	GRAB	O	U		1				x
4	P-298-R15	10/2/2023	10:32	GRAB	O	U		1				x
5	P-FD-016	10/2/2023	11:10	GRAB	O	U		1				x
6	P-FD-017	10/2/2023	11:25	GRAB	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature) John Maddigan	Date/Time: 10/2/23 14:18
Received by: (signature) 3.2°C	Date/Time: CHO 10-3-23
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. T Chain of Custody is a legal document that must be complete and accurate and is used to determine w analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. P Analytical values your partnership on each project and will try to assist with missing information, but not be held accountable.

Table of Contents

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23J4090

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

7/Building Material Samples: P-299-EX, P-300-EX, P-301-EX, P-302-EX, P-303-EX, P-304-EX, P-FD-018
1/Field Duplicate Pair: P-304-EX / P-FD-018

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on October 25, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material				
Lab Sample ID		23J4090-01RE1	23J4090-02RE1	23J4090-03RE1	23J4090-04RE1	23J4090-05RE1
Field Sample ID		P-299-EX	P-300-EX	P-301-EX	P-302-EX	P-303-EX
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	10/25/23	10/25/23	10/25/23	10/25/23	10/25/23
Aroclor 1016	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1221	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1232	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1242	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1248	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1254	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1260	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1262	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U
Aroclor 1268	mg/kg	0.087 U	0.098 U	0.096 U	0.096 U	0.097 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material	
Lab Sample ID		23J4090-06RE1	23J4090-07RE1
Field Sample ID		P-304-EX	P-FD-018
Sample Type		N	FD
Parent Sample ID			P-304-EX
Sample Date	**Units**	10/25/23	10/25/23
Aroclor 1016	mg/kg	0.092 U	0.098 U
Aroclor 1221	mg/kg	0.092 U	0.098 U
Aroclor 1232	mg/kg	0.092 U	0.098 U
Aroclor 1242	mg/kg	0.092 U	0.098 U
Aroclor 1248	mg/kg	0.092 U	0.098 U
Aroclor 1254	mg/kg	0.092 U	0.098 U
Aroclor 1260	mg/kg	0.092 U	0.098 U
Aroclor 1262	mg/kg	0.092 U	0.098 U
Aroclor 1268	mg/kg	0.092 U	0.098 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23J4090

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/13/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23J4090
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Seven (7) building material samples, including one field duplicate sample, were listed on the COC for SDG 23J4090. The samples were collected on 10/25/2023 and were received at the laboratory on 10/31/2023 at 2.0 °C.

Sample ID	Laboratory ID	Analyses
P-299-EX	23J4090-01	PCBs
P-300-EX	23J4090-02	PCBs
P-301-EX	23J4090-03	PCBs
P-302-EX	23J4090-04	PCBs
P-303-EX	23J4090-05	PCBs
P-304-EX	23J4090-06	PCBs
P-FD-018	23J4090-07	PCBs

A complete laboratory report was received for SDG 23J4090.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

Surrogates (PCBs only)

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

6. Laboratory Control Samples

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

7. Matrix Spikes

MS/MSD analyses were not performed for this SDG. No actions are required.

8. Laboratory Duplicates

Not applicable for this analysis.

9. Serial Dilution (metals only)

Not applicable for this analysis.

10. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-304-EX / P-FD-018 (23J4090-06 / 23J4090-018)

PCBs: Field duplicate precision criteria were met. No actions are required.

11. Internal Standards

Not applicable for this analysis.

12. Dual Column Precision (PCBs only)

PCB results were non-detect in all samples. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met and no actions are required.

13. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

14. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

15. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23J4090 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-304-EX**		**P-FD-018**				
	23J4090-06		**23J4090-07**				
Aroclor 1016	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1221	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1232	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1242	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1248	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1254	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1260	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1262	0.092	U	0.098	U	6.32		Ok - both ND
Aroclor 1268	0.092	U	0.098	U	6.32		Ok - both ND

23J4090 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number:	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-299-Ex	10/25/2023	11:20	GRAB	O	U		1				x	
2	P-300-Ex	10/25/2023	11:10	GRAB	O	U		1				x	
3	P-301-Ex	10/25/2023	11:30	GRAB	O	U		1				x	
4	P-302-Ex	10/25/2023	11:40	GRAB	O	U		1				x	
5	P-303-Ex	10/25/2023	11:50	GRAB	O	U		1				x	
6	P-304-Ex	10/25/2023	12:00	GRAB	O	U		1				x	
7	P-FD-018	10/25/2023	12:10	GRAB	O	U		1				x	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 10/27/23 4:30PM	Client Comments:
Received by: (signature)	Date/Time: 10/31/23 1435	
Relinquished by: (signature)	Date/Time: 10/31/23 1912	
Received by: (signature)	Date/Time: 10/31/23 1912	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23J4095

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 1 Inorganic Data Review

Toxicity Characteristic Leaching Procedure (TCLP) Lead by (1311/6010D):

6/Building Material Samples: WC-LEAD-COMP-1, WC-LEAD-COMP-2, WC-LEAD-COMP-3, WC-LEAD-COMP-4, WC-LEAD-COMP-5, WC-LEAD-COMP-FIELD DUP
1/Field Duplicate Pair: WC-LEAD-COMP-5 / WC-LEAD-COMP-FIELD DUP

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1/Stage 1 manual data review (S1VM) on the inorganic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on October 25, 2023. The samples were analyzed for TCLP Lead by EPA Methods 1311/6010D by Pace Analytical (formerly Con-test).

The Tier 1/Stage 1 manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Inorganic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

* • Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Preservation and Technical Holding Times
* • Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

TCLP Lead:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1/Stage 1 (S1VM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		TCLP Metals in Building Material				
Lab Sample ID		23J4095-01	23J4095-02	23J4095-03	23J4095-04	23J4095-05
Field Sample ID		WC-LEAD-COMP-1	WC-LEAD-COMP-2	WC-LEAD-COMP-3	WC-LEAD-COMP-4	WC-LEAD-COMP-5
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	10/25/23	10/25/23	10/25/23	10/25/23	10/25/23
Lead	mg/L	5.7	15	28	0.21	0.63

DATA SUMMARY TABLE

Analysis		TCLP Metals in Building Material
Lab Sample ID		23J4095-06
Field Sample ID		WC-LEAD-COMP-FIELD DUP
Sample Type		FD
Parent Sample ID		WC-LEAD-COMP-5
Sample Date	**Units**	10/25/23
Lead	mg/L	0.99

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23J4095

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
TCLP Lead					
	Qualification of the data was not required.				

Tier 1 Stage 1 Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/12/2023
Methods: Toxicity Characteristic Leaching Procedure (TCLP) Metals (Lead) (1311/6010D)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23J4095
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Six (6) building material (paint) samples, including one field duplicate sample, were listed on the COC for SDG 23J4095. The samples were collected on 10/25/2023 and were received at the laboratory on 10/31/2023 at 3.6 °C.

Sample ID	Laboratory ID	Analyses
WC-LEAD-COMP-1	23J4095-01	TCLP Lead
WC-LEAD-COMP-2	23J4095-02	TCLP Lead
WC-LEAD-COMP-3	23J4095-03	TCLP Lead
WC-LEAD-COMP-4	23J4095-04	TCLP Lead
WC-LEAD-COMP-5	23J4095-05	TCLP Lead
WC-LEAD-COMP-FIELD DUP	23J4095-06	TCLP Lead

A complete laboratory report was received for SDG 23J4095.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

TCLP Lead: Holding time limits are not applicable for building material samples; however, the samples were prepared and analyzed within 16 days of collection. Soil holding time for leaching and analysis is 180 days from collection. No actions are required.

3. **Calibration Issues**

Not assessed for S1VM validation.

4. **Lab and Field Blanks**

Not assessed for S1VM validation.

5. **Interference Check Sample (metals only)**

Not assessed for S1VM validation.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

6. **Surrogates (PCBs only)**

   Not applicable for this analysis.

7. **Laboratory Control Samples**

   Not assessed for S1VM validation.

8. **Matrix Spikes**

   Not assessed for S1VM validation.

9. **Laboratory Duplicates**

   Not assessed for S1VM validation

10. **Serial Dilution (metals only)**

    Not assessed for S1VM validation.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    Field duplicate pair WC-LEAD-COMP-5 / WC-LEAD-COMP-FIELD DUP is associated with the samples of this SDG.

    Not assessed for S1VM validation.

12. **Internal Standards**

    Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

    Not applicable for this analysis.

14. **Performance Evaluation (PE) Samples**

    Not assessed for S1VM validation.

15. **Quantitation Limits**

    A project action level (PAL) for TCLP lead for waste characterization was not specified in the Program QAPP or QAPPAs for the site. Laboratory quantitation limits (QLs) for TCLP lead are 0.1 mg/L. Note there are no non-detect results for TCLP lead in the samples. No actions are required.

16. **Other**

    The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23J4095 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	John Maddigan

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	TCLP Lead
1	WC-Lead-Comp-1	10/25/2023	10:10	COMP	O	U		1				x
2	WC-Lead-Comp-2	10/25/2023	10:15	COMP	O	U		1				x
3	WC-Lead-Comp-3	10/25/2023	10:25	COMP	O	U		1				x
4	WC-Lead-Comp-4	10/25/2023	10:35	COMP	O	U		1				x
5	WC-Lead-Comp-5	10/25/2023	10:45	COMP	O	U		1				x
6	WC-Lead-Comp-Field Dup	10/25/2023	10:50	COMP	O	U		1				x

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

	Date/Time:
Relinquished by: (signature)	10/27/23 4:30PM
Received by: (signature)	10/31/23 1432
Relinquished by: (signature)	10/31/23 1902
Received by: (signature)	10/31/23 1912
Relinquished by: (signature)	
Received by: (signature)	
Relinquished by: (signature)	
Received by: (signature)	

Client Comments:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0792

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-305-EX-000.5, P-306-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0792-01	23K0792-14
Field Sample ID		P-305-EX-000.5	P-306-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Aroclor 1016	mg/kg	0.084 U	0.078 U
Aroclor 1221	mg/kg	0.084 U	0.078 U
Aroclor 1232	mg/kg	0.084 U	0.078 U
Aroclor 1242	mg/kg	0.084 U	0.078 U
Aroclor 1248	mg/kg	0.084 U	0.078 U
Aroclor 1254	mg/kg	0.084 U	0.078 U
Aroclor 1260	mg/kg	0.084 U	0.078 U
Aroclor 1262	mg/kg	0.084 U	0.078 U
Aroclor 1268	mg/kg	0.084 U	0.078 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0792-01	23K0792-14
Field Sample ID		P-305-EX-000.5	P-306-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Solids, Percent	%	91.2	95.6

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0792

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/06/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0792
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0792. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.5 °C.

Sample ID	Laboratory ID	Analyses
P-305-EX-000.5	23K0792-01	PCBs
P-306-EX-000.5	23K0792-14	PCBs

A complete laboratory report was received for SDG 23K0792.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

   Not applicable for this analysis.

10. **Serial Dilution (metals only)**

    Not applicable for this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    Field duplicate samples were not submitted with the samples of this SDG. No action is required.

12. **Internal Standards**

    Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

    Sample results for PCBs were all non-detect. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) and no actions are required.

14. **Performance Evaluation (PE) Samples**

    A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

    PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. **Other**

    The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for both samples.

    Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0792 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-305-Ex-000.5	11/1/2023	9:00			U		1				X
2	P-305-Ex-0.501	11/1/2023	9:01			U		1				H
3	P-305-Ex-0101.5	11/1/2023	9:02			U		1				H
4	P-305-Ex-01.502	11/1/2023	9:03			U		1				H
5	P-305-Ex-0202.5	11/1/2023	9:04			U		1				H
6	P-305-Ex-02.503	11/1/2023	9:05			U		1				H
7	P-305-Ex-0303.5	11/1/2023	9:06			U		1				H
8	P-305-Ex-03.504	11/1/2023	9:07			U		1				H
9	P-305-Ex-0404.5	11/1/2023	9:08			U		1				H
10	P-305-Ex-04.505	11/1/2023	9:09			U		1				H

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1820	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
GT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0792 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-305-Ex-0506	11/1/2023	9:10			U		1				H	
12	P-305-Ex-0607	11/1/2023	9:11			U		1				H	
13	P-305-Ex-0708	11/1/2023	9:12			U		1				H	
14	P-306-Ex-000.5	11/1/2023	9:30			U		1				X	
15	P-306-Ex-0.501	11/1/2023	9:31			U		1				H	
16	P-306-Ex-0101.5	11/1/2023	9:32			U		1				H	
17	P-306-Ex-01.502	11/1/2023	9:33			U		1				H	
18	P-306-Ex-0202.5	11/1/2023	9:34			U		1				H	
19	P-306-Ex-02.503	11/1/2023	9:35			U		1				H	
20	P-306-Ex-0303.5	11/1/2023	9:36			U		3				H	

Relinquished by: (signature) — Date/Time: 11/6/23 1157
Received by: (signature) — Date/Time: 11/6/23 1157
Relinquished by: (signature) — Date/Time: 11/6/23 1630
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0793

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-307-EX-000.5, P-308-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0793-07	23K0793-20
Field Sample ID		P-307-EX-000.5	P-308-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Aroclor 1016	mg/kg	0.086 U	0.09 U
Aroclor 1221	mg/kg	0.086 U	0.09 U
Aroclor 1232	mg/kg	0.086 U	0.09 U
Aroclor 1242	mg/kg	0.086 U	0.09 U
Aroclor 1248	mg/kg	0.086 U	0.09 U
Aroclor 1254	mg/kg	0.086 U	0.22
Aroclor 1260	mg/kg	0.086 U	0.09 U
Aroclor 1262	mg/kg	0.086 U	0.09 U
Aroclor 1268	mg/kg	0.086 U	0.09 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0793-07	23K0793-20
Field Sample ID		P-307-EX-000.5	P-308-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Solids, Percent	%	89.1	88.9

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0793

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/06/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0793
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0793. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.5, 2.8 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-307-EX-000.5	23K0793-07	PCBs
P-308-EX-000.5	23K0793-20	PCBs

A complete laboratory report was received for SDG 23K0793.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with the samples of this SDG. No action is required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for the Aroclor 1254 detection in sample P-308-EX-000.5 (23K0793-20). No actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. **Other**

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for both samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0793 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-306-Ex-03.504	11/1/2023	9:37			U		1				H	
2	P-306-Ex-0404.5	11/1/2023	9:38			U		1				H	
3	P-306-Ex-04.505	11/1/2023	9:39			U		1				H	
4	P-306-Ex-0506	11/1/2023	9:40			U		3				H	
5	P-306-Ex-0607	11/1/2023	9:41			U		1				H	
6	P-306-Ex-0708	11/1/2023	9:42			U		1				H	
7	P-307-Ex-000.5	11/1/2023	10:20			U		1				X	
8	P-307-Ex-0.501	11/1/2023	10:21			U		1				H	
9	P-307-Ex-0101.5	11/1/2023	10:22			U		1				H	
10	P-307-Ex-01.502	11/1/2023	10:23			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature) 25, 28, 29	Date/Time: 11/6/23 1634
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0793 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-307-Ex-0202.5	11/1/2023	10:24			U		1				H	
12	P-307-Ex-02.503	11/1/2023	10:25			U		1				H	
13	P-307-Ex-0303.5	11/1/2023	10:26			U		1				H	
14	P-307-Ex-03.504	11/1/2023	10:27			U		1				H	
15	P-307-Ex-0404.5	11/1/2023	10:28			U		1				H	
16	P-307-Ex-04.505	11/1/2023	10:29			U		1				H	
17	P-307-Ex-0506	11/1/2023	10:30			U		1				H	
18	P-307-Ex-0607	11/1/2023	10:31			U		1				H	
19	P-307-Ex-0708	11/1/2023	10:32			U		1				H	
20	P-308-Ex-000.5	11/1/2023	11:00			U		1				X	

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0794

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-309-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The sample was collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0794-13
Field Sample ID		P-309-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Aroclor 1016	mg/kg	0.084 U
Aroclor 1221	mg/kg	0.084 U
Aroclor 1232	mg/kg	0.084 U
Aroclor 1242	mg/kg	0.084 U
Aroclor 1248	mg/kg	0.084 U
Aroclor 1254	mg/kg	0.084 U
Aroclor 1260	mg/kg	0.084 U
Aroclor 1262	mg/kg	0.084 U
Aroclor 1268	mg/kg	0.084 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0794-13
Field Sample ID		P-309-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Solids, Percent	%	91.8

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0794

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/06/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0794
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0794. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.8 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-309-EX-000.5	23K0794-13	PCBs

A complete laboratory report was received for SDG 23K0794.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

   Not applicable for this analysis.

10. **Serial Dilution (metals only)**

    Not applicable for this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    Field duplicate samples were not submitted with the sample of this SDG. No action is required.

12. **Internal Standards**

    Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

    Sample results for PCBs were all non-detect. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

    A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

    PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. **Other**

    The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for both samples.

    Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

'23K0744 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
1	P-308-Ex-0.501	11/1/2023	11:01			U		1				H										
2	P-308-Ex-0101.5	11/1/2023	11:02			U		1				H										
3	P-308-Ex-01.502	11/1/2023	11:03			U		1				H										
4	P-308-Ex-0202.5	11/1/2023	11:04			U		1				H										
5	P-308-Ex-02.503	11/1/2023	11:05			U		1				H										
6	P-308-Ex-0303.5	11/1/2023	11:06			U		1				H										
7	P-308-Ex-03.504	11/1/2023	11:07			U		1				H										
8	P-308-Ex-0404.5	11/1/2023	11:08			U		1				H										
9	P-308-Ex-04.505	11/1/2023	11:09			U		1				H										
10	P-308-Ex-0506	11/1/2023	11:10			U		1				H										

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23K0794 RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-308-Ex-0607	11/1/2023	11:11			U		1				H	
12	P-308-Ex-0708	11/1/2023	11:12			U		1				H	
13	P-309-Ex-000.5	11/1/2023	11:50			U		1				X	
14	P-309-Ex-0.501	11/1/2023	11:51			U		1				H	
15	P-309-Ex-0101.5	11/1/2023	11:52			U		1				H	
16	P-309-Ex-01.502	11/1/2023	11:53			U		1				H	
17	P-309-Ex-0202.5	11/1/2023	11:54			U		1				H	
18	P-309-Ex-02.503	11/1/2023	11:55			U		1				H	
19	P-309-Ex-0303.5	11/1/2023	11:56			U		1				H	
20	P-309-Ex-03.504	11/1/2023	11:57			U		3				H	

Relinquished by: (signature) — Date/Time: 11/6/23 1157
Received by: (signature) — Date/Time: 11/6/23 1157
Relinquished by: (signature) — Date/Time: 11/6/23 1620
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Lab Comments:

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0795

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-FD028, P-FD029
2/Field Duplicate Pairs: P-319-EX-000.5 (in SDG 23K0808) / P-FD028 and P-321-EX-000.5 (in SDG 23K0805) / P-FD029

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 9 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1 and 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0795-03	23K0795-04
Field Sample ID		P-FD028	P-FD029
Sample Type		FD	FD
Parent Sample ID		P-319-EX-000.5	P-321-EX-000.5
Sample Date	**Units**	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.084 U	0.081 U
Aroclor 1221	mg/kg	0.084 U	0.081 U
Aroclor 1232	mg/kg	0.084 U	0.081 U
Aroclor 1242	mg/kg	0.084 U	0.081 U
Aroclor 1248	mg/kg	0.084 U	0.081 U
Aroclor 1254	mg/kg	0.084 U	0.34
Aroclor 1260	mg/kg	0.084 U	0.081 U
Aroclor 1262	mg/kg	0.084 U	0.081 U
Aroclor 1268	mg/kg	0.084 U	0.081 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0795-03	23K0795-04
Field Sample ID		P-FD028	P-FD029
Sample Type		FD	FD
Parent Sample ID		P-319-EX-000.5	P-321-EX-000.5
Sample Date	**Units**	11/02/23	11/02/23
Solids, Percent	%	88.6	93.7

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0795

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/06/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0795
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Nine (9) soil samples were listed on the COC for SDG 23K0795. Seven (7) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/01/2023 and 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.5 °C.

Sample ID	Laboratory ID	Analyses
P-FD028	23K0795-03	PCBs
P-FD029	23K0795-04	PCBs

A complete laboratory report was received for SDG 23K0795.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pairs are associated with the samples of this SDG.

- P-319-EX-000.5 / P-FD028 (23K0808-03 / 23K0795-03)
- P-321-EX-000.5 / P-FD029 (23K0805-09 / 23K0795-04)

PCBs: Field duplicate precision criteria were met for both field duplicate pairs. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for the Aroclor 1254 detection in sample P-FD029 (23K0795-04). No actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for both samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23K0795 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-319-EX-000.5**		**P-FD028**				
	23K0808-03		**23K0795-03**				
Aroclor 1016	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1221	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1232	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1242	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1248	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1254	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1260	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1262	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1268	0.089	U	0.084	U	-5.78		Ok - both ND

Note that P-319-EX-000.5 is located in SDG 23K0808.

Field Duplicate Evaluation

SDG: 23K0795 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment[1]
Sample ID	**P-321-EX-000.5**		**P-FD029**				
	23K0805-09		**23K0795-04**				
Aroclor 1016	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1221	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1232	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1242	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1248	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1254	0.36		0.34		-5.71	-0.02	Ok - abs diff < 4x QL
Aroclor 1260	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1262	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1268	0.08	U	0.081	U	1.24		Ok - both ND

Note that P-321-EX-000.5 is located in SDG 23K0805.

23K0795 HT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-FD026	11/1/2023	8:07			U		1				H											
2	P-FD027	11/2/2023	16:00			U		1				H											
3	P-FD028	11/2/2023	16:01			U		1				X											
4	P-FD029	11/2/2023	16:02			U		1				X											
5	P-FD030	11/2/2023	16:03			U		1				H											
6	P-FD031	11/2/2023	16:04			U		1				H											
7	P-FD032	11/2/2023	16:05			U		1				H											
8	P-FD033	11/2/2023	16:06			U		1				H											
9	P-FD034	11/2/2023	16:07			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 1155
Received by: (signature)	11/6/23 1457
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0796

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-FD024
1/Field Duplicate Pair: P-314-EX-000.5 (in SDG 23K0802) / P-FD024

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023 and November 2, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0796-19
Field Sample ID		P-FD024
Sample Type		FD
Parent Sample ID		P-314-EX-000.5
Sample Date	**Units**	11/01/23
Aroclor 1016	mg/kg	0.091 U
Aroclor 1221	mg/kg	0.091 U
Aroclor 1232	mg/kg	0.091 U
Aroclor 1242	mg/kg	0.091 U
Aroclor 1248	mg/kg	0.091 U
Aroclor 1254	mg/kg	0.66
Aroclor 1260	mg/kg	0.091 U
Aroclor 1262	mg/kg	0.091 U
Aroclor 1268	mg/kg	0.091 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0796-19
Field Sample ID		P-FD024
Sample Type		FD
Parent Sample ID		P-314-EX-000.5
Sample Date	**Units**	11/01/23
Solids, Percent	%	84.7

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0796

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/06/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0796
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0796. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/01/2023 and 11/02/2023, and were received at the laboratory on 11/06/2023 at 2.5 °C.

Sample ID	Laboratory ID	Analyses
P-FD024	23K0796-19	PCBs

A complete laboratory report was received for SDG 23K0796.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-314-EX-000.5 / P-FD024 (23K0802-18 / 23K0796-19)

PCBs: Field duplicate precision criteria were met for the field duplicate pair. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFG, 2020]) were met for the Aroclor 1254 detection in sample P-FD024 (23K0796-19). No actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23K0796 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-314-EX-000.5**		**P-FD024**				
	23K0802-18		**23K0796-19**				
Aroclor 1016	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1221	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1232	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1242	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1248	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1254	0.29		0.66		77.89	0.370	Ok - abs diff < 4x QL
Aroclor 1260	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1262	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1268	0.093	U	0.091	U	-2.17		Ok - both ND

Note that P-314-EX-000.5 is located in SDG 23K0802.

23K0796 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
1	P-328-Ex-06.507	11/2/2023	10:58			U		1				H	
2	P-328-Ex-0707.5	11/2/2023	10:59			U		1				H	
3	P-328-Ex-07.508	11/2/2023	11:00			U		1				H	
4	P-328-Ex-0808.5	11/2/2023	11:01			U		1				H	
5	P-328-Ex-08.509	11/2/2023	11:02			U		1				H	
6	P-328-Ex-0909.5	11/2/2023	11:03			U		1				H	
7	P-328-Ex-09.510	11/2/2023	11:04			U		1				H	
8	P-328-Ex-1010.5	11/2/2023	11:05			U		1				H	
9	P-328-Ex-10.511	11/2/2023	11:06			U		1				H	
10	P-328-Ex-1112	11/2/2023	11:07			U		3				H	

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-329-Ex	11/2/2023	11:09			U		1				H	
12	P-330-Ex	11/2/2023	11::10			U		1				H	
13	P-331-Ex	11/2/2023	11:11			U		1				H	
14	P-FD019	11/1/2023	8:00			U		1				H	
15	P-FD020	11/1/2023	8:01			U		1				H	
16	P-FD021	11/1/2023	8:02			U		1				H	
17	P-FD022	11/1/2023	8:03			U		1				H	
18	P-FD023	11/1/2023	8:04			U		1				H	
19	P-FD024	11/1/2023	8:05			U		1				X	
20	P-FD025	11/1/2023	8:06			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time: 11/6/23 1157
Received by: (signature) Date/Time: 11/6/23 1157
Relinquished by: (signature) Date/Time: 11/6/23 1630
Received by: (signature) 25 Date/Time: 11/6/23 1630
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0797

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-325-EX-000.5, P-326-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0797-01	23K0797-14
Field Sample ID		P-325-EX-000.5	P-326-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.083 U	0.084 U
Aroclor 1221	mg/kg	0.083 U	0.084 U
Aroclor 1232	mg/kg	0.083 U	0.084 U
Aroclor 1242	mg/kg	0.083 U	0.084 U
Aroclor 1248	mg/kg	0.083 U	0.084 U
Aroclor 1254	mg/kg	0.096	0.17
Aroclor 1260	mg/kg	0.083 U	0.084 U
Aroclor 1262	mg/kg	0.083 U	0.084 U
Aroclor 1268	mg/kg	0.083 U	0.084 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0797-01	23K0797-14
Field Sample ID		P-325-EX-000.5	P-326-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Solids, Percent	%	94	92.2

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0797

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0797
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0797. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/02/2023 and were received at the laboratory on 11/06/2023 at temperatures ranging from 2.5 to 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-325-EX-000.5	23K0797-01	PCBs
P-326-EX-000.5	23K0797-14	PCBs

A complete laboratory report was received for SDG 23K0797.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-325-EX-000.5 (23K0797-01).

Percent recoveries of Aroclors 1016 and 1260 were within the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. RPDs were ≤ 30%, as specified in the Program QAPP. No actions are required.

MS/MSD analyses were also performed on sample P-326-EX-000.5 (23K0797-14).

Percent recoveries of Aroclors 1016 and 1260 were within the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. RPDs were ≤ 30%, as specified in the Program QAPP. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with this SDG. No actions are taken.

12. **Internal Standards**

Not applicable for this analysis.

13. Dual Column Precision (PCBs only)

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for the Aroclor 1254 detections in both samples. No actions are required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0147 KT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-325-Ex-000.5	11/2/2023	10:10			U		3				X	
2	P-325-Ex-0.501	11/2/2023	10:11			U		1				H	
3	P-325-Ex-0101.5	11/2/2023	10:12			U		1				H	
4	P-325-Ex-01.502	11/2/2023	10:13			U		1				H	
5	P-325-Ex-0202.5	11/2/2023	10:14			U		1				H	
6	P-325-Ex-02.503	11/2/2023	10:15			U		1				H	
7	P-325-Ex-0303.5	11/2/2023	10:16			U		1				H	
8	P-325-Ex-03.504	11/2/2023	10:17			U		1				H	
9	P-325-Ex-0404.5	11/2/2023	10:18			U		1				H	
10	P-325-Ex-04.505	11/2/2023	10:19			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)	29	Date/Time: 11/6/23 1630
Relinquished by: (signature)	28.4	Date/Time:
Received by: (signature)	25.	Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-325-Ex-0506	11/2/2023	10:20			U		1				H	
12	P-325-Ex-0607	11/2/2023	10:21			U		1				H	
13	P-325-Ex-0708	11/2/2023	10:22			U		1				H	
14	P-326-Ex-000.5	11/2/2023	10:30			U		3				X	
15	P-326-Ex-0.501	11/2/2023	10:31			U		1				H	
16	P-326-Ex-0101.5	11/2/2023	10:32			U		1				H	
17	P-326-Ex-01.502	11/2/2023	10:33			U		1				H	
18	P-326-Ex-0202.5	11/2/2023	10:34			U		1				H	
19	P-326-Ex-02.503	11/2/2023	10:35			U		1				H	
20	P-326-Ex-0303.5	11/2/2023	10:36			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0798

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-310-EX-000.5, P-311-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0798-06	23K0798-19
Field Sample ID		P-310-EX-000.5	P-311-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Aroclor 1016	mg/kg	0.081 U	0.082 U
Aroclor 1221	mg/kg	0.081 U	0.082 U
Aroclor 1232	mg/kg	0.081 U	0.082 U
Aroclor 1242	mg/kg	0.081 U	0.082 U
Aroclor 1248	mg/kg	0.081 U	0.082 U
Aroclor 1254	mg/kg	0.081 U	0.082 U
Aroclor 1260	mg/kg	0.081 U	0.082 U
Aroclor 1262	mg/kg	0.081 U	0.082 U
Aroclor 1268	mg/kg	0.081 U	0.082 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0798-06	23K0798-19
Field Sample ID		P-310-EX-000.5	P-311-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Solids, Percent	%	97.6	94.7

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0798

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0798
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0798. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.8 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-310-EX-000.5	23K0798-06	PCBs
P-311-EX-000.5	23K0798-19	PCBs

A complete laboratory report was received for SDG 23K0798.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with this SDG. No actions are taken.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

There were no detected PCB Aroclor results in the samples. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0798 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
1	P-309-Ex-0404.5	11/1/2023	11:58			U		1				H	
2	P-309-Ex-04.505	11/1/2023	11:59			U		1				H	
3	P-309-Ex-0506	11/1/2023	12:00			U		1				H	
4	P-309-Ex-0607	11/1/2023	12:01			U		1				H	
5	P-309-Ex-0708	11/1/2023	12:02			U		1				H	
6	P-310-Ex-000.5	11/1/2023	12:40			U		1				X	
7	P-310-Ex-0.501	11/1/2023	12:41			U		1				H	
8	P-310-Ex-0101.5	11/1/2023	12:42			U		1				H	
9	P-310-Ex-01.502	11/1/2023	12:43			U		1				H	
10	P-310-Ex-0202.5	11/1/2023	12:44			U		1				H	

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature) 28, 29	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344

23K0798 RF

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-310-Ex-02.503	11/1/2023	12:45			U		1				H	
12	P-310-Ex-0303.5	11/1/2023	12:46			U		1				H	
13	P-310-Ex-03.504	11/1/2023	12:47			U		1				H	
14	P-310-Ex-0404.5	11/1/2023	12:48			U		1				H	
15	P-310-Ex-04.505	11/1/2023	12:49			U		1				H	
16	P-310-Ex-0506	11/1/2023	12:50			U		3				H	
17	P-310-Ex-0607	11/1/2023	12:51			U		1				H	
18	P-310-Ex-0708	11/1/2023	12:52			U		1				H	
19	P-311-Ex-000.5	11/1/2023	13:20			U		1				X	
20	P-311-Ex-0.501	11/1/2023	13:21			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) / N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 15	
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/8 1630	28
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0799

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-327-EX-000.5, P-328-EX-0606.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0799-07	23K0799-20
Field Sample ID		P-327-EX-000.5	P-328-EX-0606.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.081 U	0.1 U
Aroclor 1221	mg/kg	0.081 U	0.1 U
Aroclor 1232	mg/kg	0.081 U	0.1 U
Aroclor 1242	mg/kg	0.081 U	0.1 U
Aroclor 1248	mg/kg	0.081 U	0.1 U
Aroclor 1254	mg/kg	0.081 U	0.1 U
Aroclor 1260	mg/kg	0.081 U	0.1 U
Aroclor 1262	mg/kg	0.081 U	0.1 U
Aroclor 1268	mg/kg	0.081 U	0.1 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0799-07	23K0799-20
Field Sample ID		P-327-EX-000.5	P-328-EX-0606.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Solids, Percent	%	98.5	79.2

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0799

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0799
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0799. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.9 and 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-327-EX-000.5	23K0799-07	PCBs
P-328-EX-0606.5	23K0799-20	PCBs

A complete laboratory report was received for SDG 23K0799.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with this SDG. No actions are taken.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

There were no detected PCB Aroclor results in the samples. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

L23K0F44 KT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction												[2] Preservation Code
1	P-326-Ex-03.504	11/2/2023	10:37			U		1				H												
2	P-326-Ex-0404.5	11/2/2023	10:38			U		1				H												
3	P-326-Ex-04.505	11/2/2023	10:39			U		1				H												
4	P-326-Ex-0506	11/2/2023	10:40			U		1				H												
5	P-326-Ex-0607	11/2/2023	10:41			U		1				H												
6	P-326-Ex-0708	11/2/2023	10:42			U		1				H												
7	P-327-Ex-000.5	11/2/2023	10:45			U		1				X												
8	P-327-Ex-0.501	11/2/2023	10:46			U		1				H												
9	P-327-Ex-0101.5	11/2/2023	10:47			U		1				H												
10	P-327-Ex-01.502	11/2/2023	10:48			U		1				H												

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1152
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-327-Ex-0202.5	11/2/2023	10:49			U		1				H	
12	P-327-Ex-02.503	11/2/2023	10:50			U		1				H	
13	P-327-Ex-0303.5	11/2/2023	10:51			U		1				H	
14	P-327-Ex-03.504	11/2/2023	10:52			U		1				H	
15	P-327-Ex-0404.5	11/2/2023	10:53			U		1				H	
16	P-327-Ex-04.505	11/2/2023	10:54			U		1				H	
17	P-327-Ex-0506	11/2/2023	10:55			U		1				H	
18	P-327-Ex-0607	11/2/2023	10:56			U		1				H	
19	P-327-Ex-0708	11/2/2023	10:57			U		1				H	
20	P-328-Ex-0606.5	11/2/2023	10:58			U		1				X	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0800

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-312-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0800-12
Field Sample ID		P-312-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Aroclor 1016	mg/kg	0.084 U
Aroclor 1221	mg/kg	0.084 U
Aroclor 1232	mg/kg	0.084 U
Aroclor 1242	mg/kg	0.084 U
Aroclor 1248	mg/kg	0.084 U
Aroclor 1254	mg/kg	0.084 U
Aroclor 1260	mg/kg	0.084 U
Aroclor 1262	mg/kg	0.084 U
Aroclor 1268	mg/kg	0.084 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0800-12
Field Sample ID		P-312-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Solids, Percent	%	91.5

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0800

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0800
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0800. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.8 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-312-EX-000.5	23K0800-12	PCBs

A complete laboratory report was received for SDG 23K0800.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

There were no PCB Aroclor detections in the sample. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. **Other**

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0800 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-311-Ex-0101.5	11/1/2023	13:22			U		1				H
2	P-311-Ex-01.502	11/1/2023	13:23			U		1				H
3	P-311-Ex-0202.5	11/1/2023	13:24			U		1				H
4	P-311-Ex-02.503	11/1/2023	13:25			U		1				H
5	P-311-Ex-0303.5	11/1/2023	13:26			U		1				H
6	P-311-Ex-03.504	11/1/2023	13:27			U		1				H
7	P-311-Ex-0404.5	11/1/2023	13:28			U		1				H
8	P-311-Ex-04.505	11/1/2023	13:29			U		1				H
9	P-311-Ex-0506	11/1/2023	13:30			U		3				H
10	P-311-Ex-0607	11/1/2023	13:31			U		1				H

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature) 28, 29	Date/Time: 11/6/23 1830
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA:
CT:
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0800 RF

Pace Analytical
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction												[2] Preservation Code
11	P-311-Ex-0708	11/1/2023	13:32			U		1				H												
12	P-312-Ex-000.5	11/1/2023	13:40			U		1				X												
13	P-312-Ex-0.501	11/1/2023	13:41			U		1				H												
14	P-312-Ex-0101.5	11/1/2023	13:42			U		1				H												
15	P-312-Ex-01.502	11/1/2023	13:43			U		1				H												
16	P-312-Ex-0202.5	11/1/2023	13:44			U		1				H												
17	P-312-Ex-02.503	11/1/2023	13:45			U		1				H												
18	P-312-Ex-0303.5	11/1/2023	13:46			U		1				H												
19	P-312-Ex-03.504	11/1/2023	13:47			U		1				H												
20	P-312-Ex-0404.5	11/1/2023	13:48			U		1				H												

Relinquished by: (signature) Date/Time: 11/6/23 1157
Received by: (signature) Date/Time: 11/6/23 1157
Relinquished by: (signature) Date/Time: 11/6/23 1630
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

*Pace Analytical is not responsible for missing samples from prepacked coolers

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0801

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-324-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 2, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0801-08
Field Sample ID		P-324-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/02/23
Aroclor 1016	mg/kg	0.083 U
Aroclor 1221	mg/kg	0.083 U
Aroclor 1232	mg/kg	0.083 U
Aroclor 1242	mg/kg	0.083 U
Aroclor 1248	mg/kg	0.083 U
Aroclor 1254	mg/kg	0.083 U
Aroclor 1260	mg/kg	0.083 U
Aroclor 1262	mg/kg	0.083 U
Aroclor 1268	mg/kg	0.083 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0801-08
Field Sample ID		P-324-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/02/23
Solids, Percent	%	93.1

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0801

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0801
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0801. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.5, 2.9, and 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-324-EX-000.5	23K0801-08	PCBs

A complete laboratory report was received for SDG 23K0801.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. Laboratory Control Samples

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. Matrix Spikes

MS/MSD analyses were not performed for this SDG. No actions are required.

9. Laboratory Duplicates

Not applicable for this analysis.

10. Serial Dilution (metals only)

Not applicable for this analysis.

11. Field Duplicate Precision

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. Internal Standards

Not applicable for this analysis.

13. Dual Column Precision (PCBs only)

There were no PCB Aroclor detections in the sample. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0801 KF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction												[2] Preservation Code
1	P-323-Ex-0303.5	11/2/2023	9:36			U		1				H												
2	P-323-Ex-03.504	11/2/2023	9:37			U		1				H												
3	P-323-Ex-0404.5	11/2/2023	9:38			U		1				H												
4	P-323-Ex-04.505	11/2/2023	9:39			U		1				H												
5	P-323-Ex-0506	11/2/2023	9:40			U		1				H												
6	P-323-Ex-0607	11/2/2023	9:41			U		3				H												
7	P-323-Ex-0708	11/2/2023	9:42			U		1				H												
8	P-324-Ex-000.5	11/2/2023	9:50			U		1				X												
9	P-324-Ex-0.501	11/2/2023	9:52			U		1				H												
10	P-324-Ex-0101.5	11/2/2023	9:53			U		1				H												

Container Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-324-Ex-01.502	11/2/2023	9:53			U		1				H	
12	P-324-Ex-0202.5	11/2/2023	9:54			U		1				H	
13	P-324-Ex-02.503	11/2/2023	9:55			U		1				H	
14	P-324-Ex-0303.5	11/2/2023	9:56			U		1				H	
15	P-324-Ex-03.504	11/2/2023	9:57			U		1				H	
16	P-324-Ex-0404.5	11/2/2023	9:58			U		1				H	
17	P-324-Ex-04.505	11/2/2023	9:59			U		1				H	
18	P-324-Ex-0506	11/2/2023	10:00			U		1				H	
19	P-324-Ex-0607	11/2/2023	10:01			U		1				H	
20	P-324-Ex-0708	11/2/2023	10:02			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y N
Glassware in freezer? Y N
Prepackaged Cooler? Y N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) Date/Time: 11/6/23 1157
Received by: (signature) Date/Time: 11/6/23 1157
Relinquished by: (signature) Date/Time: 11/6/23 1630
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
☐ MCP Certification Form Required
☐ CT RCP Required
☐ RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Lab Comments:

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0802

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-313-EX-000.5, P-314-EX-000.5
1/Field Duplicate Pair: P314-EX-000.5 / P-FD024 (in SDG 23K0796)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Preservation and Technical Holding Times
*	• Blanks
*	• Surrogates (PCBs only)
NA	• Internal Standards
*	• Matrix Spike Analysis
NA	• Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Results were qualified for dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0802-05	23K0802-18
Field Sample ID		P-313-EX-000.5	P-314-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Aroclor 1016	mg/kg	0.09 U	0.093 U
Aroclor 1221	mg/kg	0.09 U	0.093 U
Aroclor 1232	mg/kg	0.09 U	0.093 U
Aroclor 1242	mg/kg	0.09 U	0.093 U
Aroclor 1248	mg/kg	0.09 U	0.093 U
Aroclor 1254	mg/kg	0.13	0.29 J
Aroclor 1260	mg/kg	0.09 U	0.093 U
Aroclor 1262	mg/kg	0.09 U	0.093 U
Aroclor 1268	mg/kg	0.09 U	0.093 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0802-05	23K0802-18
Field Sample ID		P-313-EX-000.5	P-314-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Solids, Percent	%	85.8	84.9

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0802

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-314-EX-000.5	Dual column precision	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/13/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0802
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0802. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.8 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-313-EX-000.5	23K0802-05	PCBs
P-314-EX-000.5	23K0802-18	PCBs

A complete laboratory report was received for SDG 23K0802.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-313-EX-000.5 (23K0802-05).

Percent recoveries of Aroclors 1016 and 1260 were within the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. RPDs were ≤ 30%, as specified in the Program QAPP. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-314-EX-000.5 / P-FD024 (23K0802-18 / 23K0796-19)

PCBs: Field duplicate precision criteria were met for the field duplicate pair. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines, [NFGs, 2020]) were exceeded for the Aroclor 1254 detection in sample P-314-EX-000.5 (23K0802-18) (32%). Based on the NFGs (2020), the detected result for Aroclor 1254 in sample P-314-EX-000.5 is qualified as estimated (J) due to dual column imprecision.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23K0796 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-314-EX-000.5**		**P-FD024**				
	23K0802-18		**23K0796-19**				
Aroclor 1016	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1221	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1232	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1242	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1248	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1254	0.29		0.66		77.89	0.370	Ok - abs diff < 4x QL
Aroclor 1260	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1262	0.093	U	0.091	U	-2.17		Ok - both ND
Aroclor 1268	0.093	U	0.091	U	-2.17		Ok - both ND

Note that P-FD024 is located in SDG 23K0796.

23K0802 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-312-Ex-04.505	11/1/2023	13:49			U		1				H	
2	P-312-Ex-0506	11/1/2023	13:50			U		1				H	
3	P-312-Ex-0607	11/1/2023	13:51			U		1				H	
4	P-312-Ex-0708	11/1/2023	13:52			U		1				H	
5	P-313-Ex-000.5	11/1/2023	13:55			U		3				X	
6	P-313-Ex-0.501	11/1/2023	13:56			U		1				H	
7	P-313-Ex-0101.5	11/1/2023	13:57			U		1				H	
8	P-313-Ex-01.502	11/1/2023	13:58			U		1				H	
9	P-313-Ex-0202.5	11/1/2023	13:59			U		1				H	
10	P-313-Ex-02.503	11/1/2023	14:00			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 15
Received by: (signature)	11/6/23 1152
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	11/6/23 630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Others

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0802 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-313-Ex-0303.5	11/1/2023	14:01			U		1				H	
12	P-313-Ex-03.504	11/1/2023	14:02			U		1				H	
13	P-313-Ex-0404.5	11/1/2023	14:03			U		1				H	
14	P-313-Ex-04.505	11/1/2023	14:04			U		1				H	
15	P-313-Ex-0506	11/1/2023	14:05			U		1				H	
16	P-313-Ex-0607	11/1/2023	14:06			U		1				H	
17	P-313-Ex-0708	11/1/2023	14:07			U		1				H	
18	P-314-Ex-000.5	11/1/2023	14:10			U		1				X	
19	P-314-Ex-0.501	11/1/2023	14:11			U		1				H	
20	P-314-Ex-0101.5	11/1/2023	14:12			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1600
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0803

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-322-EX-000.5, P-323-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0803-02	23K0803-15
Field Sample ID		P-322-EX-000.5	P-323-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.085 U	0.085 U
Aroclor 1221	mg/kg	0.085 U	0.085 U
Aroclor 1232	mg/kg	0.085 U	0.085 U
Aroclor 1242	mg/kg	0.085 U	0.085 U
Aroclor 1248	mg/kg	0.085 U	0.085 U
Aroclor 1254	mg/kg	0.085 U	0.52
Aroclor 1260	mg/kg	0.085 U	0.085 U
Aroclor 1262	mg/kg	0.085 U	0.085 U
Aroclor 1268	mg/kg	0.085 U	0.085 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0803-02	23K0803-15
Field Sample ID		P-322-EX-000.5	P-323-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Solids, Percent	%	92.2	94

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0803

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0803
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0803. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.9 and 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-322-EX-000.5	23K0803-02	PCBs
P-323-EX-000.5	23K0803-15	PCBs

A complete laboratory report was received for SDG 23K0803.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed for this SDG. No action is required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with the samples of this SDG. No action is required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

L3K0808 KT

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time			
7-Day	☐	10-Day	☑
PFAS 10-Day (std)	☐	Due Date:	

Rush-Approval Required			
1-Day	☐	3-Day	☐
2-Day	☐	4-Day	☐

Data Delivery			
Format:	PDF ☑	EXCEL ☑	
Other:	Equis EDD		
CLP Like Data Pkg Required:	☐		
Email To:	tandrews@nobis-group.com		
Fax To #:			

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

PCB ONLY

SOXHLET ☑

NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-321-Ex-0708	11/2/2023	9:02			U		1				H											
2	P-322-Ex-000.5	11/2/2023	9:10			U		1				X											
3	P-322-Ex-0.501	11/2/2023	9:11			U		1				H											
4	P-322-Ex-0101.5	11/2/2023	9:12			U		1				H											
5	P-322-Ex-01.502	11/2/2023	9:13			U		1				H											
6	P-322-Ex-0202.5	11/2/2023	9:14			U		1				H											
7	P-322-Ex-02.503	11/2/2023	9:15			U		1				H											
8	P-322-Ex-0303.5	11/2/2023	9:16			U		1				H											
9	P-322-Ex-03.504	11/2/2023	9:17			U		1				H											
10	P-322-Ex-0404.5	11/2/2023	9:18			U		1				H											

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/8 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements	
MA	
CT	
Other:	

Special Requirements	
☐	MA MCP Required
	MCP Certification Form Required
☐	CT RCP Required
	RCP Certification Form Required
☐	MA State DW Required
PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
11	P-322-Ex-04.505	11/2/2023	9:19			U		3				H											
12	P-322-Ex-0506	11/2/2023	9:20			U		1				H											
13	P-322-Ex-0607	11/2/2023	9:21			U		1				H											
14	P-322-Ex-0708	11/2/2023	9:22			U		1				H											
15	P-323-Ex-000.5	11/2/2023	9:30			U		1				X											
16	P-323-Ex-0.501	11/2/2023	9:31			U		1				H											
17	P-323-Ex-0101.5	11/2/2023	9:32			U		1				H											
18	P-323-Ex-01.502	11/2/2023	9:33			U		1				H											
19	P-323-Ex-0202.5	11/2/2023	9:34			U		1				H											
20	P-323-Ex-02.503	11/2/2023	9:35			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y N
Glassware in freezer? Y N
Prepackaged Cooler? Y N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 1157
Received by: (signature)	11/6/23 1157
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0804

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-315-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
One result was qualified for dual column imprecision.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0804-11
Field Sample ID		P-315-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Aroclor 1016	mg/kg	0.45 U
Aroclor 1221	mg/kg	0.45 U
Aroclor 1232	mg/kg	0.45 U
Aroclor 1242	mg/kg	0.45 U
Aroclor 1248	mg/kg	0.45 U
Aroclor 1254	mg/kg	1.3 J
Aroclor 1260	mg/kg	3.1
Aroclor 1262	mg/kg	0.45 U
Aroclor 1268	mg/kg	0.45 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0804-11
Field Sample ID		P-315-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Solids, Percent	%	84.2

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0804

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Aroclor 1254	P-315-EX-000.5	Dual column precision	J	

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0804
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0804. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.5 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-315-EX-000.5	23K0804-11	PCBs

A complete laboratory report was received for SDG 23K0804.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

A field duplicate sample was not submitted with the samples of this SDG. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were exceeded for the detected Aroclor 1254 result in sample P-315-EX-000.5 (26.1%). Based on the NFGs (2020), the detected result for Aroclor 1254 in sample P-315-EX-000.5 (23K0804-11) is qualified as estimated (J) due to dual column imprecision.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. **Other**

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0804 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										[2] Preservation Code
1	P-314-Ex-01.502	11/1/2023	14:13			U		1				H										
2	P-314-Ex-0202.5	11/1/2023	14:14			U		1				H										
3	P-314-Ex-02.503	11/1/2023	14:15			U		1				H										
4	P-314-Ex-0303.5	11/1/2023	14:16			U		1				H										
5	P-314-Ex-03.504	11/1/2023	14:17			U		1				H										
6	P-314-Ex-0404.5	11/1/2023	14:18			U		1				H										
7	P-314-Ex-04.505	11/1/2023	14:19			U		1				H										
8	P-314-Ex-0506	11/1/2023	14:20			U		1				H										
9	P-314-Ex-0607	11/1/2023	14:21			U		1				H										
10	P-314-Ex-0708	11/1/2023	14:22			U		1				H										

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23K0804 RF

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-315-Ex-000.5	11/1/2023	14:25			U		1				X
12	P-315-Ex-0.501	11/1/2023	14:26			U		1				H
13	P-315-Ex-0101.5	11/1/2023	14:27			U		1				H
14	P-315-Ex-01.502	11/1/2023	14:28			U		1				H
15	P-315-Ex-0202.5	11/1/2023	14:29			U		1				H
16	P-315-Ex-02.503	11/1/2023	14:30			U		1				H
17	P-315-Ex-0303.5	11/1/2023	14:31			U		1				H
18	P-315-Ex-03.504	11/1/2023	14:32			U		1				H
19	P-315-Ex-0404.5	11/1/2023	14:33			U		1				H
20	P-315-Ex-04.505	11/1/2023	14:34			U		3				H

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Lab Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0805

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-321-EX-000.5
1/Field Duplicate Pair: P-321-EX-000.5 / P-FD029 (in SDG 23K0795)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 2, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0805-09
Field Sample ID		P-321-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/02/23
Aroclor 1016	mg/kg	0.08 U
Aroclor 1221	mg/kg	0.08 U
Aroclor 1232	mg/kg	0.08 U
Aroclor 1242	mg/kg	0.08 U
Aroclor 1248	mg/kg	0.08 U
Aroclor 1254	mg/kg	0.36
Aroclor 1260	mg/kg	0.08 U
Aroclor 1262	mg/kg	0.08 U
Aroclor 1268	mg/kg	0.08 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0805-09
Field Sample ID		P-321-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/02/23
Solids, Percent	%	94

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0805

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data is not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/11/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0805
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0805. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.5, 2.9, and 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-321-EX-000.5	23K0805-09	PCBs

A complete laboratory report was received for SDG 23K0805.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-321-EX-000.5 / P-FD029 (23K0805-09 / 23K0795-04)

PCBs: Field duplicate precision criteria were met for the field duplicate pair. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for the detected Aroclor 1254 result in sample P-321-EX-000.5 (5.7%). No actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23K0795 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment[1]
Sample ID	**P-321-EX-000.5**		**P-FD029**				
	23K0805-09		**23K0795-04**				
Aroclor 1016	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1221	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1232	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1242	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1248	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1254	0.36		0.34		-5.71	-0.02	Ok - abs diff < 4x QL
Aroclor 1260	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1262	0.08	U	0.081	U	1.24		Ok - both ND
Aroclor 1268	0.08	U	0.081	U	1.24		Ok - both ND

Note that P-FD029 is located in SDG 23K0795.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-320-Ex-02.503	11/2/2023	8:35			U		1				H											
2	P-320-Ex-0303.5	11/2/2023	8:36			U		1				H											
3	P-320-Ex-03.504	11/2/2023	8:37			U		1				H											
4	P-320-Ex-0404.5	11/2/2023	8:38			U		1				H											
5	P-320-Ex-04.505	11/2/2023	8:39			U		1				H											
6	P-320-Ex-0506	11/2/2023	8:40			U		1				H											
7	P-320-Ex-0607	11/2/2023	8:41			U		1				H											
8	P-320-Ex-0708	11/2/2023	8:42			U		1				H											
9	P-321-Ex-000.5	11/2/2023	8:50			U		1				X											
10	P-321-Ex-0.501	11/2/2023	8:51			U		1				H											

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 115	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1230	
Received by: (signature) 40.29	Date/Time: 11/6/23 1630	
Relinquished by: (signature) 25	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-321-Ex-0101.5	11/2/2023	8:52			U		1				H	
12	P-321-Ex-01.502	11/2/2023	8:53			U		1				H	
13	P-321-Ex-0202.5	11/2/2023	8:54			U		1				H	
14	P-321-Ex-02.503	11/2/2023	8:55			U		1				H	
15	P-321-Ex-0303.5	11/2/2023	8:56			U		1				H	
16	P-321-Ex-03.504	11/2/2023	8:57			U		1				H	
17	P-321-Ex-0404.5	11/2/2023	8:58			U		1				H	
18	P-321-Ex-04.505	11/2/2023	8:59			U		1				H	
19	P-321-Ex-0506	11/2/2023	9:00			U		1				H	
20	P-321-Ex-0607	11/2/2023	9:01			U		3				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157	
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0806

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-318-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 19 soil samples included on the COC were placed on hold and therefore, one sample was analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023 and November 2, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23K0806-10
Field Sample ID		P-318-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/02/23
Aroclor 1016	mg/kg	0.089 U
Aroclor 1221	mg/kg	0.089 U
Aroclor 1232	mg/kg	0.089 U
Aroclor 1242	mg/kg	0.089 U
Aroclor 1248	mg/kg	0.089 U
Aroclor 1254	mg/kg	0.089 U
Aroclor 1260	mg/kg	0.089 U
Aroclor 1262	mg/kg	0.089 U
Aroclor 1268	mg/kg	0.089 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23K0806-10
Field Sample ID		P-318-EX-000.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/02/23
Solids, Percent	%	89.3

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0806

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data is not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/12/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0806
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0806. Nineteen (19) of the samples were placed on hold and one sample was scheduled for analysis. The samples were collected on 11/01/2023 and 11/02/2023, and were received at the laboratory on 11/06/2023 at 2.9 and 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-318-EX-000.5	23K0806-10	PCBs

A complete laboratory report was received for SDG 23K0806.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

MS/MSD analyses were not performed for this SDG. No actions are required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with the samples of this SDG. No actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Results for all PCB Aroclors were non-detect in the sample. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. **Other**

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0806 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-317-Ex-0202.5	11/1/2023	14:59			U		1				H	
2	P-317-Ex-02.503	11/1/2023	15:00			U		1				H	
3	P-317-Ex-0303.5	11/1/2023	15:01			U		1				H	
4	P-317-Ex-03.504	11/1/2023	15:02			U		1				H	
5	P-317-Ex-0404.5	11/1/2023	15:03			U		1				H	
6	P-317-Ex-04.505	11/1/2023	15:04			U		1				H	
7	P-317-Ex-0506	11/1/2023	15:05			U		1				H	
8	P-317-Ex-0607	11/1/2023	15:06			U		1				H	
9	P-317-Ex-0708	11/1/2023	15:07			U		1				H	
10	P-318-Ex-000.5	11/2/2023	8:00			U		1				X	

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 15	
Received by: (signature)	Date/Time: 11/6/23 1512	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-318-Ex-0.501	11/2/2023	8:01			U		1				H	
12	P-318-Ex-0101.5	11/2/2023	8:02			U		1				H	
13	P-318-Ex-01.502	11/2/2023	8:03			U		1				H	
14	P-318-Ex-0202.5	11/2/2023	8:04			U		1				H	
15	P-318-Ex-02.503	11/2/2023	8:05			U		1				H	
16	P-318-Ex-0303.5	11/2/2023	8:06			U		1				H	
17	P-318-Ex-03.504	11/2/2023	8:07			U		1				H	
18	P-318-Ex-0404.5	11/2/2023	8:08			U		1				H	
19	P-318-Ex-04.505	11/2/2023	8:09			U		1				H	
20	P-318-Ex-0506	11/2/2023	8:10			U		3				H	

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0807

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-316-EX-000.5, P-317-EX-000.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0807-04	23K0807-17
Field Sample ID		P-316-EX-000.5	P-317-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Aroclor 1016	mg/kg	0.09 U	0.083 U
Aroclor 1221	mg/kg	0.09 U	0.083 U
Aroclor 1232	mg/kg	0.09 U	0.083 U
Aroclor 1242	mg/kg	0.09 U	0.083 U
Aroclor 1248	mg/kg	0.09 U	0.083 U
Aroclor 1254	mg/kg	0.32	0.083 U
Aroclor 1260	mg/kg	0.09 U	0.083 U
Aroclor 1262	mg/kg	0.09 U	0.083 U
Aroclor 1268	mg/kg	0.09 U	0.083 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0807-04	23K0807-17
Field Sample ID		P-316-EX-000.5	P-317-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/01/23	11/01/23
Solids, Percent	%	85.4	95.4

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0807

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/12/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0807
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0807. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.5, 2.9, and 4.0 °C.

Sample ID	Laboratory ID	Analyses
P-316-EX-000.5	23K0807-04	PCBs
P-317-EX-000.5	23K0807-14	PCBs

A complete laboratory report was received for SDG 23K0807.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed for this SDG. No action is required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with the samples of this SDG. No action is required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K0807 KF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-315-Ex-0506	11/1/2023	14:35			U		1				H
2	P-315-Ex-0607	11/1/2023	14:36			U		1				H
3	P-315-Ex-0708	11/1/2023	14:37			U		1				H
4	P-316-Ex-000.5	11/1/2023	14:40			U		1				X
5	P-316-Ex-0.501	11/1/2023	14:41			U		1				H
6	P-316-Ex-0101.5	11/1/2023	14:42			U		1				H
7	P-316-Ex-01.502	11/1/2023	14:43			U		1				H
8	P-316-Ex-0202.5	11/1/2023	14:44			U		1				H
9	P-316-Ex-02.503	11/1/2023	14:45			U		1				H
10	P-316-Ex-0303.5	11/1/2023	14:46			U		1				H

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) / N

Glassware in freezer? Y (N)

Prepackaged Cooler? (Y) / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1650
Received by: (signature)	25 29 40	Date/Time: 11/6/23 1630
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23K0807-RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6444

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	*Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction													[2] Preservation Code
11	P-316-Ex-03.504	11/1/2023	14:47			U		1				H													
12	P-316-Ex-0404.5	11/1/2023	14:48			U		1				H													
13	P-316-Ex-04.505	11/1/2023	14:49			U		1				H													
14	P-316-Ex-0506	11/1/2023	14:50			U		1				H													
15	P-316-Ex-0607	11/1/2023	14:51			U		1				H													
16	P-316-Ex-0708	11/1/2023	14:52			U		3				H													
17	P-317-Ex-000.5	11/1/2023	14:55			U		1				X													
18	P-317-Ex-0.501	11/1/2023	14:56			U		1				H													
19	P-317-Ex-0101.5	11/1/2023	14:57			U		1				H													
20	P-317-Ex-01.502	11/1/2023	14:58			U		1				H													

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Lab Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
! = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

December 12, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K0808

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

2/Soil Samples: P-319-EX-000.5, P-320-EX-000.5
1/Field Duplicate Pair: P-319-EX-000.5 / P-FD028 (in SDG 23K0795)

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. Note that 18 soil samples included on the COC were placed on hold and therefore, two samples were analyzed and included in this SDG for review. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
*	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil	
Lab Sample ID		23K0808-03	23K0808-16
Field Sample ID		P-319-EX-000.5	P-320-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.089 U	0.086 U
Aroclor 1221	mg/kg	0.089 U	0.086 U
Aroclor 1232	mg/kg	0.089 U	0.086 U
Aroclor 1242	mg/kg	0.089 U	0.086 U
Aroclor 1248	mg/kg	0.089 U	0.086 U
Aroclor 1254	mg/kg	0.089 U	0.086 U
Aroclor 1260	mg/kg	0.089 U	0.086 U
Aroclor 1262	mg/kg	0.089 U	0.086 U
Aroclor 1268	mg/kg	0.089 U	0.086 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil	
Lab Sample ID		23K0808-03	23K0808-16
Field Sample ID		P-319-EX-000.5	P-320-EX-000.5
Sample Type		N	N
Parent Sample ID			
Sample Date	**Units**	11/02/23	11/02/23
Solids, Percent	%	87.4	90.1

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K0808

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/12/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K0808
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23K0808. Eighteen (18) of the samples were placed on hold and two samples were scheduled for analysis. The samples were collected on 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.5 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-319-EX-000.5	23K0808-03	PCBs
P-320-EX-000.5	23K0807-16	PCBs

A complete laboratory report was received for SDG 23K0808.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within 14 days of collection and analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the samples of this SDG. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed for this SDG. No action is required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

The following field duplicate pair is associated with the samples of this SDG.

- P-319-EX-000.5 / P-FD028 (23K0808-03 / 23K0795-03)

Field duplicate precision criteria were met and no actions are required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Results for all PCB Aroclors were non-detect in the samples. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

Field Duplicate Evaluation

SDG: 23K0795 PCBs

Analyte	Original Result mg/kg	Qual	Duplicate Result mg/kg	Qual	RPD ≤ 50%	Abs Diff	Comment
Sample ID	**P-319-EX-000.5**		**P-FD028**				
	23K0808-03		**23K0795-03**				
Aroclor 1016	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1221	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1232	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1242	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1248	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1254	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1260	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1262	0.089	U	0.084	U	-5.78		Ok - both ND
Aroclor 1268	0.089	U	0.084	U	-5.78		Ok - both ND

Note that P-FD028 is located in SDG 23K0795.

L1K08808 KF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-318-Ex-0607	11/2/2023	8:11			U		1				H											
2	P-318-Ex-0708	11/2/2023	8:12			U		1				H											
3	P-319-Ex-000.5	11/2/2023	8:15			U		1				X											
4	P-319-Ex-0.501	11/2/2023	8:16			U		1				H											
5	P-319-Ex-0101.5	11/2/2023	8:17			U		1				H											
6	P-319-Ex-01.502	11/2/2023	8:18			U		1				H											
7	P-319-Ex-0202.5	11/2/2023	8:19			U		1				H											
8	P-319-Ex-02.503	11/2/2023	8:20			U		1				H											
9	P-319-Ex-0303.5	11/2/2023	8:21			U		1				H											
10	P-319-Ex-03.504	11/2/2023	8:22			U		3				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
11	P-319-Ex-0404.5	11/2/2023	8:23			U		1				H											
12	P-319-Ex-04.505	11/2/2023	8:24			U		1				H											
13	P-319-Ex-0506	11/2/2023	8:25			U		1				H											
14	P-319-Ex-0607	11/2/2023	8:26			U		1				H											
15	P-319-Ex-0708	11/2/2023	8:27			U		1				H											
16	P-320-Ex-000.5	11/2/2023	8:30			U		1				X											
17	P-320-Ex-0.501	11/2/2023	8:31			U		1				H											
18	P-320-Ex-0101.5	11/2/2023	8:32			U		1				H											
19	P-320-Ex-01.502	11/2/2023	8:33			U		1				H											
20	P-320-Ex-0202.5	11/2/2023	8:34			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K1921

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

3/Building Material Samples: P-329-EX, P-330-EX, P-331-EX

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023 and November 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
*	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that 20 samples are included on the COC for this SDG. All samples were placed on hold at the laboratory except for sample P-FD024, which was analyzed and reported in SDG 23K0796. Analysis of 3 of the on-hold samples was subsequently requested by Nobis. This data review includes results for the 3 samples.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material		
Lab Sample ID		23K1921-01	23K1921-02	23K1921-03
Field Sample ID		P-329-EX	P-330-EX	P-331-EX
Sample Type		N	N	N
Parent Sample ID				
Sample Date	**Units**	11/02/23	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1221	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1232	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1242	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1248	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1254	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1260	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1262	mg/kg	0.099 U	0.099 U	0.099 U
Aroclor 1268	mg/kg	0.099 U	0.099 U	0.099 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K1921

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/12/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K1921
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) building material samples, including seven (7) field duplicate samples, were listed on the COC for SDG 23K1921. Note that all samples except P-FD024 were placed on hold. Sample P-FD024 was analyzed and reported in SDG 23K0796. Analysis of 3 of the on-hold samples was subsequently requested by Nobis. Results for the 3 samples are reported in this SDG and included in the data review. The samples were collected on 11/01/2023 and 11/02/2023 and were received at the laboratory on 11/06/2023 at 2.5 °C.

Sample ID	Laboratory ID	Analyses
P-329-EX	23K1921-01	PCBs
P-330-EX	23K1921-02	PCBs
P-331-EX	23K1921-03	PCBs

A complete laboratory report was received for SDG 23K1921.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were performed on sample P-329-EX (23K1921-01).

Percent recoveries of Aroclors 1016 and 1260 met the Program QAPP limits of 40-140% in the MS and MSD analyses on both analytical columns. No action is required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were analyzed with the samples of this SDG. No action is required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Results for all PCB Aroclors were non-detect for all samples. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met. No actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23K1921

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
	P-328-Ex-06.507	11/2/2023	10:58			U		1				H	
	P-328-Ex-0707.5	11/2/2023	10:59			U		1				H	
	P-328-Ex-07.508	11/2/2023	11:00			U		1				H	
	P-328-Ex-0808.5	11/2/2023	11:01			U		1				H	
	P-328-Ex-08.509	11/2/2023	11:02			U		1				H	
	P-328-Ex-0909.5	11/2/2023	11:03			U		1				H	
	P-328-Ex-09.510	11/2/2023	11:04			U		1				H	
	P-328-Ex-1010.5	11/2/2023	11:05			U		1				H	
	P-328-Ex-10.511	11/2/2023	11:06			U		1				H	
	P-328-Ex-1112	11/2/2023	11:07			U		3				H	

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Per client, P-329-Ex, P-330-Ex & P-331-Ex are to be analyzed.

-RLF 11/14/23

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
01	P-329-Ex	11/2/2023	11:09			U		1				H	
02	P-330-Ex	11/2/2023	11::10			U		1				H	
03	P-331-Ex	11/2/2023	11:11			U		1				H	
	P-FD019	11/1/2023	8:00			U		1				H	
	P-FD020	11/1/2023	8:01			U		1				H	
	P-FD021	11/1/2023	8:02			U		1				H	
	P-FD022	11/1/2023	8:03			U		1				H	
	P-FD023	11/1/2023	8:04			U		1				H	
	P-FD024	11/1/2023	8:05			U		1				X	
	P-FD025	11/1/2023	8:06			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/6/23 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23K2921

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

9/Soil Samples: P-308-EX-0.501, P-313-EX-0.501, P-314-EX-0.501, P-315-EX-0.501, P-315-EX-0101.5, P-316-EX-0.501, P-321-EX-0.501, P-323-EX-0.501, P-326-EX-0.501

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023 and November 2, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

Note that 20 samples are included on the COC for this SDG. All samples were placed on hold at the laboratory. Analysis of the 9 samples of this SDG was subsequently requested by Nobis on 11/20/2023. This data review includes results for the 9 samples.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil				
Lab Sample ID		23K2921-01	23K2921-02	23K2921-03	23K2921-04	23K2921-05
Field Sample ID		P-308-EX-0.501	P-313-EX-0.501	P-314-EX-0.501	P-315-EX-0.501	P-315-EX-0101.5
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	11/01/23	11/01/23	11/01/23	11/01/23	11/01/23
Aroclor 1016	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U
Aroclor 1221	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U
Aroclor 1232	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U
Aroclor 1242	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U
Aroclor 1248	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U
Aroclor 1254	mg/kg	0.084 U	0.15	0.1	0.085 U	0.087 U
Aroclor 1260	mg/kg	0.084 U	0.083 U	0.087 U	1.3	0.097
Aroclor 1262	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U
Aroclor 1268	mg/kg	0.084 U	0.083 U	0.087 U	0.085 U	0.087 U

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil			
Lab Sample ID		23K2921-06	23K2921-07	23K2921-08	23K2921-09
Field Sample ID		P-316-EX-0.501	P-321-EX-0.501	P-323-EX-0.501	P-326-EX-0.501
Sample Type		N	N	N	N
Parent Sample ID					
Sample Date	**Units**	11/01/23	11/02/23	11/02/23	11/02/23
Aroclor 1016	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1221	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1232	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1242	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1248	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1254	mg/kg	0.11	0.2	0.23	0.082 U
Aroclor 1260	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1262	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U
Aroclor 1268	mg/kg	0.086 U	0.083 U	0.083 U	0.082 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil				
Lab Sample ID		23K2921-01	23K2921-02	23K2921-03	23K2921-04	23K2921-05
Field Sample ID		P-308-EX-0.501	P-313-EX-0.501	P-314-EX-0.501	P-315-EX-0.501	P-315-EX-0101.5
Sample Type		N	N	N	N	N
Parent Sample ID						
Sample Date	**Units**	11/01/23	11/01/23	11/01/23	11/01/23	11/01/23
Solids, Percent	%	91.5	91.3	89.7	90.2	90

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil			
Lab Sample ID		23K2921-06	23K2921-07	23K2921-08	23K2921-09
Field Sample ID		P-316-EX-0.501	P-321-EX-0.501	P-323-EX-0.501	P-326-EX-0.501
Sample Type		N	N	N	N
Parent Sample ID					
Sample Date	**Units**	11/01/23	11/02/23	11/02/23	11/02/23
Solids, Percent	%	88.6	93	93.1	93.3

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23K2921

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/13/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23K2921
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Nine (9) soil samples were listed on the COC for SDG 23K2921. The samples were collected on 11/01/2023 and 11/02/2023 and were received at the laboratory on 11/06/2023 at temperatures ranging from 2.5 to 4.0 °C. The samples were placed on hold. Analysis of these 9 samples was subsequently requested by Nobis on 11/20/2023. Results for the 9 samples are reported in this SDG and included in the data review.

Sample ID	Laboratory ID	Analyses
P-308-EX-0.501	23K2921-01	PCBs
P-313-EX-0.501	23K2921-02	PCBs
P-314-EX-0.501	23K2921-03	PCBs
P-315-EX-0.501	23K2921-04	PCBs
P-315-EX-0101.5	23K2921-05	PCBs
P-316-EX-0.501	23K2921-06	PCBs
P-321-EX-0.501	23K2921-07	PCBs
P-323-EX-0.501	23K2921-08	PCBs
P-326-EX-0.501	23K2921-09	PCBs

A complete laboratory report was received for SDG 23K2921.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The samples were extracted within the holding time of 14 days of the samples being released from on-hold status (November 20, 2023). The samples were analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program QAPP (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

   Not applicable for this analysis.

6. **Surrogates (PCBs only)**

   PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

   If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
   If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

   MS/MSD analyses were not performed for this SDG. No action is required.

9. **Laboratory Duplicates**

   Not applicable for this analysis.

10. **Serial Dilution (metals only)**

    Not applicable for this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    Field duplicate samples were not submitted with the samples of this SDG. No actions are required.

12. **Internal Standards**

    Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

    Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met for all Aroclor detections. RPDs for the Aroclor 1254 detections in samples 23K2921-03

and 23K2921-06 were not provided by laboratory since detections were near the RL and alternate column results were < RL. No actions are required.

14. Performance Evaluation (PE) Samples

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% was met for all soil samples. No actions are required.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

'23K0744 RF

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										
1	P-308-Ex-0.501	11/1/2023	11:01			U		1				H										
2	P-308-Ex-0101.5	11/1/2023	11:02			U		1				H										
3	P-308-Ex-01.502	11/1/2023	11:03			U		1				H										
4	P-308-Ex-0202.5	11/1/2023	11:04			U		1				H										
5	P-308-Ex-02.503	11/1/2023	11:05			U		1				H										
6	P-308-Ex-0303.5	11/1/2023	11:06			U		1				H										
7	P-308-Ex-03.504	11/1/2023	11:07			U		1				H										
8	P-308-Ex-0404.5	11/1/2023	11:08			U		1				H										
9	P-308-Ex-04.505	11/1/2023	11:09			U		1				H										
10	P-308-Ex-0506	11/1/2023	11:10			U		1				H										

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y (N)
Prepackaged Cooler? (Y) / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 1157
Received by: (signature)	Date/Time:	11/6/23 1157
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 1630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

23K0794 RF

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	
11	P-308-Ex-0607	11/1/2023	11:11			U		1				H	
12	P-308-Ex-0708	11/1/2023	11:12			U		1				H	
13	P-309-Ex-000.5	11/1/2023	11:50			U		1				X	
14	P-309-Ex-0.501	11/1/2023	11:51			U		1				H	
15	P-309-Ex-0101.5	11/1/2023	11:52			U		1				H	
16	P-309-Ex-01.502	11/1/2023	11:53			U		1				H	
17	P-309-Ex-0202.5	11/1/2023	11:54			U		1				H	
18	P-309-Ex-02.503	11/1/2023	11:55			U		1				H	
19	P-309-Ex-0303.5	11/1/2023	11:56			U		1				H	
20	P-309-Ex-03.504	11/1/2023	11:57			U		3				H	

Relinquished by: (signature) — Date/Time: 11/6/23 1157
Received by: (signature) — Date/Time: 11/6/23 1157
Relinquished by: (signature) — Date/Time: 11/6/23 1620
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Lab Comments:

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? (Y) N
Prepackaged Cooler? (Y) N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0147 KT

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-325-Ex-000.5	11/2/2023	10:10			U		3				X	
2	P-325-Ex-0.501	11/2/2023	10:11			U		1				H	
3	P-325-Ex-0101.5	11/2/2023	10:12			U		1				H	
4	P-325-Ex-01.502	11/2/2023	10:13			U		1				H	
5	P-325-Ex-0202.5	11/2/2023	10:14			U		1				H	
6	P-325-Ex-02.503	11/2/2023	10:15			U		1				H	
7	P-325-Ex-0303.5	11/2/2023	10:16			U		1				H	
8	P-325-Ex-03.504	11/2/2023	10:17			U		1				H	
9	P-325-Ex-0404.5	11/2/2023	10:18			U		1				H	
10	P-325-Ex-04.505	11/2/2023	10:19			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)	29	Date/Time: 11/6/23 1630
Relinquished by: (signature)	28.4	Date/Time:
Received by: (signature)	25.	Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-325-Ex-0506	11/2/2023	10:20			U		1				H	
12	P-325-Ex-0607	11/2/2023	10:21			U		1				H	
13	P-325-Ex-0708	11/2/2023	10:22			U		1				H	
14	P-326-Ex-000.5	11/2/2023	10:30			U		3				X	
15	P-326-Ex-0.501	11/2/2023	10:31			U		1				H	
16	P-326-Ex-0101.5	11/2/2023	10:32			U		1				H	
17	P-326-Ex-01.502	11/2/2023	10:33			U		1				H	
18	P-326-Ex-0202.5	11/2/2023	10:34			U		1				H	
19	P-326-Ex-02.503	11/2/2023	10:35			U		1				H	
20	P-326-Ex-0303.5	11/2/2023	10:36			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0802 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
1	P-312-Ex-04.505	11/1/2023	13:49			U		1				H	
2	P-312-Ex-0506	11/1/2023	13:50			U		1				H	
3	P-312-Ex-0607	11/1/2023	13:51			U		1				H	
4	P-312-Ex-0708	11/1/2023	13:52			U		1				H	
5	P-313-Ex-000.5	11/1/2023	13:55			U		3				X	
6	P-313-Ex-0.501	11/1/2023	13:56			U		1				H	
7	P-313-Ex-0101.5	11/1/2023	13:57			U		1				H	
8	P-313-Ex-01.502	11/1/2023	13:58			U		1				H	
9	P-313-Ex-0202.5	11/1/2023	13:59			U		1				H	
10	P-313-Ex-02.503	11/1/2023	14:00			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 15
Received by: (signature)	11/6/23 1152
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	11/6/23 630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Others

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0802 RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-313-Ex-0303.5	11/1/2023	14:01			U		1				H	
12	P-313-Ex-03.504	11/1/2023	14:02			U		1				H	
13	P-313-Ex-0404.5	11/1/2023	14:03			U		1				H	
14	P-313-Ex-04.505	11/1/2023	14:04			U		1				H	
15	P-313-Ex-0506	11/1/2023	14:05			U		1				H	
16	P-313-Ex-0607	11/1/2023	14:06			U		1				H	
17	P-313-Ex-0708	11/1/2023	14:07			U		1				H	
18	P-314-Ex-000.5	11/1/2023	14:10			U		1				X	
19	P-314-Ex-0.501	11/1/2023	14:11			U		1				H	
20	P-314-Ex-0101.5	11/1/2023	14:12			U		1				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1600
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

L3K0808 KT

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time			
7-Day	☐	10-Day	☑
PFAS 10-Day (std)	☐	Due Date:	

Rush-Approval Required			
1-Day	☐	3-Day	☐
2-Day	☐	4-Day	☐

Data Delivery			
Format:	PDF ☑	EXCEL ☑	
Other:	Equis EDD		
CLP Like Data Pkg Required:	☐		
Email To:	tandrews@nobis-group.com		
Fax To #:			

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

PCB ONLY

SOXHLET ☑

NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-321-Ex-0708	11/2/2023	9:02			U		1				H											
2	P-322-Ex-000.5	11/2/2023	9:10			U		1				X											
3	P-322-Ex-0.501	11/2/2023	9:11			U		1				H											
4	P-322-Ex-0101.5	11/2/2023	9:12			U		1				H											
5	P-322-Ex-01.502	11/2/2023	9:13			U		1				H											
6	P-322-Ex-0202.5	11/2/2023	9:14			U		1				H											
7	P-322-Ex-02.503	11/2/2023	9:15			U		1				H											
8	P-322-Ex-0303.5	11/2/2023	9:16			U		1				H											
9	P-322-Ex-03.504	11/2/2023	9:17			U		1				H											
10	P-322-Ex-0404.5	11/2/2023	9:18			U		1				H											

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time: 11/8 1630	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements	
MA	
CT	
Other:	

Special Requirements	
☐	MA MCP Required
	MCP Certification Form Required
☐	CT RCP Required
	RCP Certification Form Required
☐	MA State DW Required
PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
11	P-322-Ex-04.505	11/2/2023	9:19			U		3				H											
12	P-322-Ex-0506	11/2/2023	9:20			U		1				H											
13	P-322-Ex-0607	11/2/2023	9:21			U		1				H											
14	P-322-Ex-0708	11/2/2023	9:22			U		1				H											
15	P-323-Ex-000.5	11/2/2023	9:30			U		1				X											
16	P-323-Ex-0.501	11/2/2023	9:31			U		1				H											
17	P-323-Ex-0101.5	11/2/2023	9:32			U		1				H											
18	P-323-Ex-01.502	11/2/2023	9:33			U		1				H											
19	P-323-Ex-0202.5	11/2/2023	9:34			U		1				H											
20	P-323-Ex-02.503	11/2/2023	9:35			U		1				H											

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y N
Glassware in freezer? Y N
Prepackaged Cooler? Y N
*Pace Analytical is not responsible for missing samples from prepacked coolers

	Date/Time:
Relinquished by: (signature)	11/6/23 1157
Received by: (signature)	11/6/23 1157
Relinquished by: (signature)	11/6/23 1630
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

23K0804 RF

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction										[2] Preservation Code
1	P-314-Ex-01.502	11/1/2023	14:13			U		1				H										
2	P-314-Ex-0202.5	11/1/2023	14:14			U		1				H										
3	P-314-Ex-02.503	11/1/2023	14:15			U		1				H										
4	P-314-Ex-0303.5	11/1/2023	14:16			U		1				H										
5	P-314-Ex-03.504	11/1/2023	14:17			U		1				H										
6	P-314-Ex-0404.5	11/1/2023	14:18			U		1				H										
7	P-314-Ex-04.505	11/1/2023	14:19			U		1				H										
8	P-314-Ex-0506	11/1/2023	14:20			U		1				H										
9	P-314-Ex-0607	11/1/2023	14:21			U		1				H										
10	P-314-Ex-0708	11/1/2023	14:22			U		1				H										

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time: 11/6/23 1630
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

23K0804 RF

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
11	P-315-Ex-000.5	11/1/2023	14:25			U		1				X
12	P-315-Ex-0.501	11/1/2023	14:26			U		1				H
13	P-315-Ex-0101.5	11/1/2023	14:27			U		1				H
14	P-315-Ex-01.502	11/1/2023	14:28			U		1				H
15	P-315-Ex-0202.5	11/1/2023	14:29			U		1				H
16	P-315-Ex-02.503	11/1/2023	14:30			U		1				H
17	P-315-Ex-0303.5	11/1/2023	14:31			U		1				H
18	P-315-Ex-03.504	11/1/2023	14:32			U		1				H
19	P-315-Ex-0404.5	11/1/2023	14:33			U		1				H
20	P-315-Ex-04.505	11/1/2023	14:34			U		3				H

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1630
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Lab Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction											[2] Preservation Code
1	P-320-Ex-02.503	11/2/2023	8:35			U		1				H											
2	P-320-Ex-0303.5	11/2/2023	8:36			U		1				H											
3	P-320-Ex-03.504	11/2/2023	8:37			U		1				H											
4	P-320-Ex-0404.5	11/2/2023	8:38			U		1				H											
5	P-320-Ex-04.505	11/2/2023	8:39			U		1				H											
6	P-320-Ex-0506	11/2/2023	8:40			U		1				H											
7	P-320-Ex-0607	11/2/2023	8:41			U		1				H											
8	P-320-Ex-0708	11/2/2023	8:42			U		1				H											
9	P-321-Ex-000.5	11/2/2023	8:50			U		1				X											
10	P-321-Ex-0.501	11/2/2023	8:51			U		1				H											

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time: 11/6/23 115	Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1230	
Received by: (signature) 40.29	Date/Time: 11/6/23 1630	
Relinquished by: (signature) 25	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344
https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time
7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
11	P-321-Ex-0101.5	11/2/2023	8:52			U		1				H	
12	P-321-Ex-01.502	11/2/2023	8:53			U		1				H	
13	P-321-Ex-0202.5	11/2/2023	8:54			U		1				H	
14	P-321-Ex-02.503	11/2/2023	8:55			U		1				H	
15	P-321-Ex-0303.5	11/2/2023	8:56			U		1				H	
16	P-321-Ex-03.504	11/2/2023	8:57			U		1				H	
17	P-321-Ex-0404.5	11/2/2023	8:58			U		1				H	
18	P-321-Ex-04.505	11/2/2023	8:59			U		1				H	
19	P-321-Ex-0506	11/2/2023	9:00			U		1				H	
20	P-321-Ex-0607	11/2/2023	9:01			U		3				H	

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157	
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1630	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

23K0807 KF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	500001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction
1	P-315-Ex-0506	11/1/2023	14:35			U		1				H
2	P-315-Ex-0607	11/1/2023	14:36			U		1				H
3	P-315-Ex-0708	11/1/2023	14:37			U		1				H
4	P-316-Ex-000.5	11/1/2023	14:40			U		1				X
5	P-316-Ex-0.501	11/1/2023	14:41			U		1				H
6	P-316-Ex-0101.5	11/1/2023	14:42			U		1				H
7	P-316-Ex-01.502	11/1/2023	14:43			U		1				H
8	P-316-Ex-0202.5	11/1/2023	14:44			U		1				H
9	P-316-Ex-02.503	11/1/2023	14:45			U		1				H
10	P-316-Ex-0303.5	11/1/2023	14:46			U		1				H

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? (Y) / N

Glassware in freezer? Y (N)

Prepackaged Cooler? (Y) / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)		Date/Time: 11/6/23 1157
Received by: (signature)		Date/Time: 11/6/23 1157
Relinquished by: (signature)		Date/Time: 11/6/23 1650
Received by: (signature)	25 29 40	Date/Time: 11/6/23 1630
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

23K0807-RF

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6444

https://www.pacelabs.com/

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☒
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	*Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction													[2] Preservation Code
11	P-316-Ex-03.504	11/1/2023	14:47			U		1				H													
12	P-316-Ex-0404.5	11/1/2023	14:48			U		1				H													
13	P-316-Ex-04.505	11/1/2023	14:49			U		1				H													
14	P-316-Ex-0506	11/1/2023	14:50			U		1				H													
15	P-316-Ex-0607	11/1/2023	14:51			U		1				H													
16	P-316-Ex-0708	11/1/2023	14:52			U		3				H													
17	P-317-Ex-000.5	11/1/2023	14:55			U		1				X													
18	P-317-Ex-0.501	11/1/2023	14:56			U		1				H													
19	P-317-Ex-0101.5	11/1/2023	14:57			U		1				H													
20	P-317-Ex-01.502	11/1/2023	14:58			U		1				H													

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157
Received by: (signature)	Date/Time: 11/6/23 1157
Relinquished by: (signature)	Date/Time: 11/6/23 1630
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Lab Comments:

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

[2] Preservation Code
Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] Preservation Codes:
! = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Table of Contents

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23L0356

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

3/Building Material Samples: P-332-EX, P-333-EX, P-334-EX

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the samples listed above. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on December 3, 2023. The samples were analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates
*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Building Material		
Lab Sample ID		23L0356-01	23L0356-02	23L0356-03
Field Sample ID		P-332-EX	P-333-EX	P-334-EX
Sample Type		N	N	N
Parent Sample ID				
Sample Date	**Units**	12/04/23	12/04/23	12/04/23
Aroclor 1016	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1221	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1232	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1242	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1248	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1254	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1260	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1262	mg/kg	0.091 U	0.095 U	0.095 U
Aroclor 1268	mg/kg	0.091 U	0.095 U	0.095 U

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23L0356

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/14/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23L0356
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Three (3) building material samples were listed on the COC for SDG 23L0356. The samples were collected on 12/03/2023 and were received at the laboratory on 12/04/2023 at 3.8 °C.

Sample ID	Laboratory ID	Analyses
P-332-EX	23L0356-01	PCBs
P-333-EX	23L0356-02	PCBs
P-334-EX	23L0356-03	PCBs

A complete laboratory report was received for SDG 23L0356.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: Holding time limits are not applicable for building material samples, based on Table 3 of the Quality Assurance Project Plan Addendum (QAPPA) for the St. Johnsbury Armory site (July 2023). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the samples of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

6. **Surrogates (PCBs only)**

PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for all samples. No actions are required.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

7. **Laboratory Control Samples**

PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

MS/MSD analyses were not performed for this SDG. No action is required.

9. **Laboratory Duplicates**

Not applicable for this analysis.

10. **Serial Dilution (metals only)**

Not applicable for this analysis.

11. **Field Duplicate Precision**

Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

Field duplicate samples were not submitted with the samples of this SDG. No action is required.

12. **Internal Standards**

Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

Results for all Aroclors were non-detect in all samples. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) were met. No actions are required.

14. **Performance Evaluation (PE) Samples**

A PE sample was not submitted with the samples of this SDG. No actions are required.

15. **Quantitation Limits**

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples does not apply to building material samples.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23L0356 RT

Pace Analytical

Phone: 413-525-2332
Fax: 413-525-6405
http://www.pacelabs.com
39 Spruce Street
East Longmeadow, MA 01028

Access COC's and Support Requests

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 5_07/13/2021

Company Name:	Nobis Group
Address:	18 Chenell Drive, Concord NH
Phone:	
Project Name:	St. Johnsbury Armory
Project Location:	St. Johnsbury VT
Project Number:	50000.017
Project Manager:	Tim Andrews
Pace Quote Name/Number:	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time			
7-Day	☐	10-Day	☐
PFAS 10-Day (std)	☐	Due Date:	12/8

Rush-Approval Required			
1-Day	☐	3-Day	☒
2-Day	☐	4-Day	☐

Dissolved Metals Samples	
○	Field Filtered
○	Lab to Filter

Orthophosphate Samples	
○	Field Filtered
○	Lab to Filter

Data Delivery

Format: PDF ☒ EXCEL ☒
Other: EQuIS EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY
SOXHLET ☒
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet												
1	P-332-Ex	12/3/23	10:30	G	SOL	U		1				✓												
2	P-333-Ex	↓	10:50	G	SOL	U		1				✓												
3	P-334-Ex	↓	11:15	G	SOL	U		1				✓												

Relinquished by: (signature)	Date/Time: 12/4/23 13:20	Client Comments:
Received by: (signature)	Date/Time: 12/4/23 1320	
Relinquished by: (signature)	Date/Time: 12/4/23 17:20	
Received by: (signature) 3.8	Date/Time: 12/4 1720	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements		Special Requirements	
MA		☐	MA MCP Required
			MCP Certification Form Required
CT		☐	CT RCP Required
			RCP Certification Form Required
Other:		☐	MA State DW Required
		PWSID #	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government	☐	Municipality	☐	MWRA	☐	WRTA	☐
Federal	☐	21 J	☐	School	☐		
City	☐	Brownfield	☐	MBTA	☐		

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

December 18, 2023
Nobis File No. S00001.017

Ms. Christine Beling
USEPA - Region I
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
USEPA Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA) Site
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 23L0426

Pace Analytical (formerly Con-test), East Longmeadow, MA

Tier 1 Stage 2A Organic Data Review

Polychlorinated Biphenyls (PCBs by 8082A):

1/Soil Sample: P-313-EX-0101.5

Dear Ms. Beling:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV II, LLC (KGSNE), performed a Tier 1 Stage 2A manual data review (S2AVM) on the organic analytical data for the sample listed above. Note that 18 soil samples included on the COC were placed on hold or analyzed and reported in other SDGs. The sample of this SDG was placed on hold and analysis of the sample was subsequently requested by Nobis on December 5, 2023. The samples were collected by Nobis at the St. Johnsbury Armory site located in St. Johnsbury, Vermont, on November 1, 2023. The sample was analyzed for PCB Aroclors by EPA Method 8082A by Pace Analytical (formerly Con-test).

The Tier 1 Stage 2A manual data review was performed in accordance with the Region I - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Organic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) and the QAPPA Update (October 2023) for St. Johnsbury Armory, which append the October 2022 Program QAPP.

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	Blanks
*	•	Surrogates (PCBs only)
NA	•	Internal Standards
NA	•	Matrix Spike Analysis
NA	•	Laboratory Duplicates

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

*	•	Laboratory Control Samples (LCS)/Standard Reference Material (SRM) Recovery (metals only)
NA	•	Field Duplicates
NA	•	ICP Serial Dilutions (metals only)
NA	•	Performance Evaluation (PE) Samples
*	•	Target Analyte Identification
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or qualification was not required.
NA – Not applicable.

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project quality criteria and can be used without restriction except as summarized below. The attachments provide details and supporting documentation.

PCBs:
Qualification of the data was not required.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Linda Terzis
Data Validator

Gary Glennon
Data Validator

Tables: Data Summary Tables – Tier 1 Stage 2A (S2AVM) Validated Data
Data Qualification Actions Table

Attachments: Data Review Checklist
Support Documentation
COC

cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

DATA SUMMARY TABLE

Analysis		Pesticides/PCBs in Soil
Lab Sample ID		23L0426-01
Field Sample ID		P-313-EX-0101.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Aroclor 1016	mg/kg	0.088 U
Aroclor 1221	mg/kg	0.088 U
Aroclor 1232	mg/kg	0.088 U
Aroclor 1242	mg/kg	0.088 U
Aroclor 1248	mg/kg	0.088 U
Aroclor 1254	mg/kg	0.088 U
Aroclor 1260	mg/kg	0.088 U
Aroclor 1262	mg/kg	0.088 U
Aroclor 1268	mg/kg	0.088 U

DATA SUMMARY TABLE

Analysis		General Chemistry in Soil
Lab Sample ID		23L0426-01
Field Sample ID		P-313-EX-0101.5
Sample Type		N
Parent Sample ID		
Sample Date	**Units**	11/01/23
Solids, Percent	%	90.8

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 23L0426

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
PCBs					
	Qualification of the data was not required.				

Tier 1 Stage 2A Data Review Checklist

Project: St. Johnsbury Armory Site, St. Johnsbury, Vermont
Project #: S00001.017
Case#: NA
Date: 12/15/2023
Methods: PCBs (8082A)
Laboratory: Pace Analytical (formerly Con-test), East Longmeadow, MA
SDG: 23L0426
Reviewer: Linda Terzis

1. **Case Narrative and Data Package Completeness (COC and Analyte List Review)**
Twenty (20) soil samples were listed on the COC for SDG 23L0426. Eighteen (18) of the samples were placed on hold and two samples were analyzed and reported in other SDGs. The sample of this SDG (23L0426) was placed on hold. Analysis of the sample was subsequently requested by Nobis on 12/05/2023. The samples were collected on 11/01/2023 and were received at the laboratory on 11/06/2023 at 2.8 and 2.9 °C.

Sample ID	Laboratory ID	Analyses
P-313-EX-0101.5	23L0426-01	PCBs

A complete laboratory report was received for SDG 23L0426.

2. **Holding Time and Sample Preservation Compliance**

Receipt temperature met the acceptable level of ≤ 6 °C.

PCBs: The sample was extracted within 14 days of the sample being released from on-hold status (December 5, 2023). The sample was analyzed within 40 days of extraction, as specified on Table 2-6-1 of the Program Quality Assurance Project Plan (QAPP) for the St. Johnsbury Armory site (October 2022). No actions are required.

3. **Calibration Issues**

Not assessed for S2AVM.

4. **Lab and Field Blanks**

PCBs: Results for the laboratory method blank associated with the sample of this SDG were non-detect. No blank actions are required.

An equipment blank was not required during sample collection for the site.

5. **Interference Check Sample (metals only)**

Not applicable for this analysis.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

6. **Surrogates (PCBs only)**

   PCBs: Surrogate recoveries were within the Program QAPP limits (30-150%) for the sample of this SDG. No actions are required.

7. **Laboratory Control Samples**

   PCBs: Percent recoveries of Aroclors 1016 and 1260 in the PCB LCS/LCSD pair met the Program QAPP limits of 40-140% recovery and relative percent difference (RPD) ≤ 30%. No action is required.

8. **Matrix Spikes**

   PCBs: Only Aroclors 1016 and 1260 were spiked in the MS/MSD; therefore, based on professional judgment, if actions are required, they are applied as follows:

   If 1016 %R or %RPD out: Qualify 1016, 1221, 1232, 1242
   If 1260 %R or %RPD out: Qualify 1248, 1254, 1260, 1262,1268

   MS/MSD analyses were performed for this SDG. No action is required.

9. **Laboratory Duplicates**

   Not applicable for this analysis.

10. **Serial Dilution (metals only)**

    Not applicable for this analysis.

11. **Field Duplicate Precision**

    Criteria based on the EPA Region I Environmental Data Review Supplement (September 2020): RPD ≤ 50% (soils) for results ≥ 5x QL or absolute difference of ≤ 4x QL for results < 5X QL.

    Field duplicate samples were not submitted with the sample of this SDG. No action is required.

12. **Internal Standards**

    Not applicable for this analysis.

13. **Dual Column Precision (PCBs only)**

    Results for all PCB Aroclors were non-detect in the sample. Dual column precision criteria (≤ 25% RPD per the National Functional Guidelines [NFGs, 2020]) are met and no actions are required.

14. **Performance Evaluation (PE) Samples**

    A PE sample was not submitted with the samples of this SDG. No actions are required.

15. Quantitation Limits

PCBs: Laboratory quantitation limits (QLs) for non-detect Aroclor results met the PAL of ≤ 1 mg/kg for total PCBs, per Table 4 of the QAPPA.

16. Other

The EPA Region I Environmental Data Review Supplement (2020) percent solids criterion of ≥ 30% for soil samples was met for the sample.

Overall bias is considered indeterminate when cumulative nonconformances do not show a consistent bias or in cases of the presence of conflicting high and low biases.

23L0426

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 4_01/08/2020

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	[2] Preservation Code
	P-312-Ex-04.505	11/1/2023	13:49			U		1				H	
	P-312-Ex-0506	11/1/2023	13:50			U		1				H	
	P-312-Ex-0607	11/1/2023	13:51			U		1				H	
	P-312-Ex-0708	11/1/2023	13:52			U		1				H	
	P-313-Ex-000.5	11/1/2023	13:55			U		3				X	
	P-313-Ex-0.501	11/1/2023	13:56			U		1				H	
	P-313-Ex-0101.5	11/1/2023	13:57			U		1				H	
	P-313-Ex-01.502	11/1/2023	13:58			U		1				H	
	P-313-Ex-0202.5	11/1/2023	13:59			U		1				H	
	P-313-Ex-02.503	11/1/2023	14:00			U		1				H	

01

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Relinquished by: (signature)	Date/Time:	11/6/23 15
Received by: (signature)	Date/Time:	11/6/23 1152
Relinquished by: (signature)	Date/Time:	11/6/23 1630
Received by: (signature)	Date/Time:	11/6/23 630
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Detection Limit Requirements

MA
CT
Others

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Lab Comments:

Per client, P-313-Ex-0101.5 to be activated for 8082 soxhlet.

-RLF 12/5/23

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	Nobis Group
Address:	585 Middlesex St. Lowell, MA 01851
Phone:	978-683-0891
Project Name:	St Johnsbury Armory
Project Location:	St Johnsbury, VT
Project Number:	S00001.017
Project Manager:	Tim Andrews
Pace Analytical Quote Name/Number	
Invoice Recipient:	
Sampled By:	B. Fortier

Requested Turnaround Time

7-Day ☐ 10-Day ☑
PFAS 10-Day (std) ☐ Due Date:

Rush-Approval Required

1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☑
Other: Equis EDD
CLP Like Data Pkg Required: ☐
Email To: tandrews@nobis-group.com
Fax To #:

Dissolved Metals Samples

○ Field Filtered
○ Lab to Filter

Orthophosphate Samples

○ Field Filtered
○ Lab to Filter

PCB ONLY

SOXHLET ☑
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PCBs 8082 Soxhlet Extraction	I
	P-313-Ex-0303.5	11/1/2023	14:01			U		1				H	
	P-313-Ex-03.504	11/1/2023	14:02			U		1				H	
	P-313-Ex-0404.5	11/1/2023	14:03			U		1				H	
	P-313-Ex-04.505	11/1/2023	14:04			U		1				H	
	P-313-Ex-0506	11/1/2023	14:05			U		1				H	
	P-313-Ex-0607	11/1/2023	14:06			U		1				H	
	P-313-Ex-0708	11/1/2023	14:07			U		1				H	
	P-314-Ex-000.5	11/1/2023	14:10			U		1				H	
	P-314-Ex-0.501	11/1/2023	14:11			U		1				X	
	P-314-Ex-0101.5	11/1/2023	14:12			U		1				H	

Client Comments: Please hold samples marked "H", pending results of other analyses. Samples with 3 jars are MS/MSDs.

Relinquished by: (signature)	Date/Time: 11/6/23 1157	
Received by: (signature)	Date/Time: 11/6/23 1157	
Relinquished by: (signature)	Date/Time: 11/6/23 1600	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements

MA
CT
Other:

Special Requirements

☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

[2] Preservation Code

Courier Use Only

Total Number Of:

VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Building Material

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

October 4, 2023
Nobis File No. S00001.017

Ms. Karen Place
USEPA – Region 1
Land, Chemicals, and Redevelopment Division
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: USEPA Contract No. 68HE0122D0001
Task Order No. 68HE0122F0044
Targeted Brownfield Assessment (TBA)
St. Johnsbury Armory Site
St. Johnsbury, Vermont
Sample Delivery Group (SDG) No. 132305450
EMSL Analytical, Inc., Woburn, MA

Tier 1/Stage 1 (S1VM) Data Review

Asbestos by Polarized Light Microscopy (PLM by Method 40CFR 763 Subpart E Appendix E Supplemented with EPA Method 600/R-93/116)

97/Building Material Samples: A-001A-R22, A-001B-R27, A-002A-R10, A-002B-R06, A-003A-R10, A-003B-R16, A-004A-R23, A-004B-R23, A-005A-R14, A-005B-R14, A-006A-R5, A-006B-R5, A-006C-R5, A-007A-R15, A-007B-R15, A-008A-R15, A-008B-R15, A-009A-R23, A-009B-R23, A-010A-R23 A-010B-R23, A-011A-R34, A-011B-R27, A-011C-R27, A-012A-R20, A-012B-R21, A-013A-R18 A-013B-R18, A-014A-R13, A-014B-R14, A-015A-R12, A-015B-R12, A-016A-R17, A-016B-R17 A-017A-R03, A-017B-R03, A-039A-R07, A-039B-R07, A-040A-R12, A-040B-R12, A-041A-R14, A-041B-R14, A-042A-R18, A-042B-R18, A-043A-R21, A-043B-R21, A-044A-R34, A-044B-R34 A-018A-N, A-018B-W, A-018C-S, A-019A-R23, A-019B-R37, A-019C-R28, A-020A-R06, A-020B-R06, A-035A-R07, A-035B-R07, A-036A-R12, A-036B-R12, A-037A-R14, A-037B-R14, A-038A-R28, A-038B-R28, A-021A, A-021B, A-021C, A-022A, A-022B, A-022C, A-023A, A-023B, A-024A, A-024B, A-025A, A-025B, A-026A, A-026B, A-045A, A-045B, A-027A, A-027B, A-028A, A-028B, A-029A, A-029B, A-030A, A-030B, A-031A, A-031B, A-031C, A-032A, A-032B, A-033A, A-033B, A-034A, A-034B

Dear Ms. Place:

Nobis Group (Nobis), under a USEPA contract as a subcontractor to KGSNE JV, LLC (KGSNE), performed a Tier 1/Stage 1 manual (S1VM) data completeness review on the asbestos analytical data for the samples listed above. The samples were collected on 08/15/2023 through 08/16/2023 by Nobis at St. Johnsbury Armory in St. Johnsbury, Vermont. The samples were analyzed by EMSL Analytical, Inc. in Woburn, MA, for asbestos by PLM by Method 40CFR 763 Subpart E Appendix E Supplemented with EPA Method 600/R-93/116.

The Tier 1/Stage 1 manual data review was performed in accordance with the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures (September 2020); USEPA's National Functional Guidelines for Inorganic Superfund Methods Data Review (November 2020); the Program Quality Assurance Project Plan (Program QAPP) dated October 2022, and the Quality Assurance Project Plan Addendum (QAPPA) (July 2023) for the St. Johnsbury Armory project, which appends the October 2022 Program QAPP.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

The data were evaluated based on the following parameters:

*	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness
NA	•	Preservation and Technical Holding Times
*	•	Reported Quantitation Limits

* All criteria were met for this parameter or results did not require qualification.
NA-Not applicable

Overall Evaluation of Data and Potential Usability Issues

The site sampling objectives are:

- Perform a supplemental hazardous building material survey (HBMS) to address data gaps identified by Atlas Technical Consultants (ATC).
- Further delineate the distribution of hazardous materials to support future building renovation and reuse or demolition and disposal.
- Evaluate sub-slab soils for possible contamination by PCBs.

The data meet the project completeness criteria and can be used without restriction.

The attachments provide details and supporting documentation.

Please contact Linda Terzis at lterzis@nobis-group.com should you have any questions or comments regarding this information.

Sincerely,

NOBIS GROUP®

Caitlin Odell

Caitlin Odell
Data Validator

Linda Terzis

Linda Terzis
Data Validator

Attachments: Data Review Checklist
Support Documentation
COC
Laboratory Report

Cc: Denis McGrath (Nobis Group)
Tim Andrews (Nobis Group)

Data Review Qualification Actions
Case: St. Johnsbury Armory
SDG: 132305450

Parameter	Analyte	Samples	Evaluation Criteria	Action Needed	Comments
Asbestos					
	Qualification of the data was not required.				

Asbestos S1VM Data Review Checklist

Project: St. Johnsbury Armory
Methods:
Asbestos by Polarized Light Microscopy (PLM by Method 40CFR 763 Subpart E Appendix E Supplemented with EPA Method 600/R-93/116)

Project #: S00001.017
Case#: NA
Date: 08/29/2023

Laboratory: EMSL Analytical, Inc., Woburn, MA
SDG: 132305450
Reviewer: Caitlin Odell

1. Case Narrative and Data Package Completeness (COC and Analyte List Review)

Ninety-seven (97) building material samples, collected on 08/15/2023 through 08/16/2023, were listed on the chain of custody (COC). The samples were received by the laboratory on 08/22/2023 and were analyzed and reported in SDG 132305450.

The samples were analyzed by EMSL Analytical, Inc., in Woburn, MA, for asbestos by PLM using Method 40CFR 763 Subpart E Appendix E supplemented with EPA Method 600/R-93/116.

A limited data package (results only) for the sample analyses was received for 132305450.

Sample ID	Laboratory ID	Matrix	Analyses
A-001A-R22	132305450-0001	Building material	Asbestos by PLM
A-001B-R27	132305450-0002	Building material	Asbestos by PLM
A-002A-R10	132305450-0003	Building material	Asbestos by PLM
A-002B-R06	132305450-0004	Building material	Asbestos by PLM
A-003A-R10	132305450-0005	Building material	Asbestos by PLM
A-003B-R16	132305450-0006	Building material	Asbestos by PLM
A-004A-R23	132305450-0007	Building material	Asbestos by PLM
A-004B-R23	132305450-0008	Building material	Asbestos by PLM
A-005A-R14	132305450-0009	Building material	Asbestos by PLM
A-005B-R14	132305450-0010	Building material	Asbestos by PLM
A-006A-R5	132305450-0011	Building material	Asbestos by PLM
A-006B-R5	132305450-0012	Building material	Asbestos by PLM
A-006C-R5	132305450-0013	Building material	Asbestos by PLM
A-007A-R15	132305450-0014	Building material	Asbestos by PLM
A-007B-R15	132305450-0015	Building material	Asbestos by PLM
A-008A-R15	132305450-0016	Building material	Asbestos by PLM
A-008B-R15	132305450-0017	Building material	Asbestos by PLM
A-009A-R23	132305450-0018	Building material	Asbestos by PLM
A-009B-R23	132305450-0019	Building material	Asbestos by PLM

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

Sample ID	Laboratory ID	Matrix	Analyses
A-010A-R23	132305450-0020	Building material	Asbestos by PLM
A-010B-R23	132305450-0021	Building material	Asbestos by PLM
A-011A-R34	132305450-0022	Building material	Asbestos by PLM
A-011B-R27	132305450-0023	Building material	Asbestos by PLM
A-011C-R27	132305450-0024	Building material	Asbestos by PLM
A-012A-R20	132305450-0025	Building material	Asbestos by PLM
A-012B-R21	132305450-0026	Building material	Asbestos by PLM
A-013A-R18	132305450-0027	Building material	Asbestos by PLM
A-013B-R18	132305450-0028	Building material	Asbestos by PLM
A-014A-R13	132305450-0029	Building material	Asbestos by PLM
A-014B-R14	132305450-0030	Building material	Asbestos by PLM
A-015A-R12	132305450-0031	Building material	Asbestos by PLM
A-015B-R12	132305450-0032	Building material	Asbestos by PLM
A-016A-R17	132305450-0033	Building material	Asbestos by PLM
A-016B-R17	132305450-0034	Building material	Asbestos by PLM
A-017A-R03	132305450-0035	Building material	Asbestos by PLM
A-017B-R03	132305450-0036	Building material	Asbestos by PLM
A-039A-R07	132305450-0037	Building material	Asbestos by PLM
A-039B-R07	132305450-0038	Building material	Asbestos by PLM
A-040A-R12	132305450-0039	Building material	Asbestos by PLM
A-040B-R12	132305450-0040	Building material	Asbestos by PLM
A-041A-R14	132305450-0041	Building material	Asbestos by PLM
A-041B-R14	132305450-0042	Building material	Asbestos by PLM
A-042A-R18	132305450-0043	Building material	Asbestos by PLM
A-042B-R18	132305450-0044	Building material	Asbestos by PLM
A-043A-R21	132305450-0045	Building material	Asbestos by PLM
A-043B-R21	132305450-0046	Building material	Asbestos by PLM
A-044A-R34	132305450-0047	Building material	Asbestos by PLM
A-044B-R34	132305450-0048	Building material	Asbestos by PLM
A-018A-N	132305450-0049	Building material	Asbestos by PLM
A-018B-W	132305450-0050	Building material	Asbestos by PLM
A-018C-S	132305450-0051	Building material	Asbestos by PLM
A-019A-R23	132305450-0052	Building material	Asbestos by PLM
A-019B-R37	132305450-0053	Building material	Asbestos by PLM
A-019C-R28	132305450-0054	Building material	Asbestos by PLM
A-020A-R06	132305450-0055	Building material	Asbestos by PLM
A-020B-R06	132305450-0056	Building material	Asbestos by PLM
A-035A-R07	132305450-0057	Building material	Asbestos by PLM
A-035B-R07	132305450-0058	Building material	Asbestos by PLM
A-036A-R12	132305450-0059	Building material	Asbestos by PLM
A-036B-R12	132305450-0060	Building material	Asbestos by PLM
A-037A-R14	132305450-0061	Building material	Asbestos by PLM
A-037B-R14	132305450-0062	Building material	Asbestos by PLM
A-038A-R28	132305450-0063	Building material	Asbestos by PLM
A-038B-R28	132305450-0064	Building material	Asbestos by PLM
A-021A	132305450-0065	Building material	Asbestos by PLM
A-021B	132305450-0066	Building material	Asbestos by PLM
A-021C	132305450-0067	Building material	Asbestos by PLM
A-022A	132305450-0068	Building material	Asbestos by PLM

Sample ID	Laboratory ID	Matrix	Analyses
A-022B	132305450-0069	Building material	Asbestos by PLM
A-022C	132305450-0070	Building material	Asbestos by PLM
A-023A	132305450-0071	Building material	Asbestos by PLM
A-023B	132305450-0072	Building material	Asbestos by PLM
A-024A	132305450-0073	Building material	Asbestos by PLM
A-024B	132305450-0074	Building material	Asbestos by PLM
A-025A	132305450-0075	Building material	Asbestos by PLM
A-025B	132305450-0076	Building material	Asbestos by PLM
A-026A	132305450-0077	Building material	Asbestos by PLM
A-026B	132305450-0078	Building material	Asbestos by PLM
A-045A	132305450-0079	Building material	Asbestos by PLM
A-045B	132305450-0080	Building material	Asbestos by PLM
A-027A	132305450-0081	Building material	Asbestos by PLM
A-027B	132305450-0082	Building material	Asbestos by PLM
A-028A	132305450-0083	Building material	Asbestos by PLM
A-028B	132305450-0084	Building material	Asbestos by PLM
A-029A	132305450-0085	Building material	Asbestos by PLM
A-029B	132305450-0086	Building material	Asbestos by PLM
A-030A	132305450-0087	Building material	Asbestos by PLM
A-030B	132305450-0088	Building material	Asbestos by PLM
A-031A	132305450-0089	Building material	Asbestos by PLM
A-031B	132305450-0090	Building material	Asbestos by PLM
A-031C	132305450-0091	Building material	Asbestos by PLM
A-032A	132305450-0092	Building material	Asbestos by PLM
A-032B	132305450-0093	Building material	Asbestos by PLM
A-033A	132305450-0094	Building material	Asbestos by PLM
A-033B	132305450-0095	Building material	Asbestos by PLM
A-034A	132305450-0096	Building material	Asbestos by PLM
A-034B	132305450-0097	Building material	Asbestos by PLM

Note that several sample results were reported as “Positive Stop (Not Analyzed)” for the PLM analysis. “Positive stop” indicates that one sample from a homogeneous area is greater than 1% asbestos and therefore, the other samples of the homogeneous area do not need to be analyzed.

2. Holding Time and Sample Preservation Compliance

No holding time or preservation criteria are applicable for the asbestos analyses of these bulk building material samples.

3. Laboratory Blanks

N/A

4. Laboratory Control Sample Review

N/A

5. **Field Duplicate Precision**

   No field duplicates were submitted with this data set.

6. **Laboratory Duplicate Precision**

   N/A

7. **Matrix Spike Results (if applicable)**

   N/A

8. **Surrogate Recovery (if applicable)**

   N/A

9. **Quantitation Limits**

   Laboratory reporting limits for non-detect PLM results meet the project action limit of asbestos (< 1%), as indicated on the COC.

10. **Internal Standard Recovery (if applicable)**

    N/A

11. **Other**

    No issues noted.

OrderID: 132305450

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132305450

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Nobis Group	Company Name:	
Contact Name:	Bridget Fortier	Billing Contact:	
Street Address:	585 Middlesex Street	Street Address:	
City, State, Zip:	Lowell, MA	City, State, Zip:	
Country:		Country:	
Phone:	B. Fortier (978-399-9651) bfortier@nobis-group.com	Phone:	
Email(s) for Report:	Tim Andrews: tandrews@nobis-group.com	Email(s) for Invoice:	ap@nobis-group.com

Project Information

Project Name/No:	St Johnsbury Armory	Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	VT
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)		
Sampled By Name:	Bridget Fortier	Sampled By Signature:	
Date Sampled:		No. of Samples in Shipment	

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☑ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable - NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

☑ Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
A-001a-R22	1	Room 22	Yellow mastic on concrete
A-001b-R27	1	Room 27	Yellow mastic on concrete
A-002a-R10	2	Room 10	Cellotex board
A-002b-R06	2	Room 06	Cellotex board
A-003a-R10	3	Room 10	Thin wall panels
A-003b-R16	3	Room 16	Thin wall panels
A-004a-R23	4	Room 23	Tile grout
A-004b-R23	4	Room 23	tile grout
A-005a-R14	5	Room 14	white sub-floor plaster like filler
A-005b-R14	5	Room 14	white sub-floor plaster like filler

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

REC'D SPC 1455 walk in
EMSL-BOSTON AUG 22 2023

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 8/22/23 14:55	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - Asbestos Bulk R7 9/14/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 132305450

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132305450

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
A-006a-R5	6	Room 5	gray adhesive on brown paneling
A-006b-R5	6	Room 5	gray adhesive on brown paneling
A-006c-R5	6	Room 5	gray adhesive on brown paneling
A-007a-R15	7	Room 15	Gray battleship linoleum
A-007b-R15	7	Room 15	Gray battleship linoleum
A-008a-R15	8	Room 15	brown mastic on gray battleship linoleum
A-008b-R15	8	Room 15	brown mastic on gray battleship linoleum
A-009a-R23	9	Room 23	ceramic tile
A-009b-R23	9	Room 23	ceramic tile
A-010a-R23	10	Room 23	ceramic tile thinset
A-010b-R23	10	Room 23	ceramic tile thinset
A-011a-R34	11	Room 34	leveling compound
A-011b-R27	11	Room 27	leveling compound
A-011c-R27	11	Room 27	leveling compound
A-012a-R20	12	Room 20	Sprinkler fitting thread sealant
A-012b-R21	12	Room 21	Sprinkler fitting thread sealant
A-013a-R18	13	Room 18	black mastic
A-013b-R18	13	Room 18	black mastic
A-014a-R13	14	Room 13	beige mastic
A-014b-R14	14	Room 14	beige mastic
A-015a-R12	15	Room 12	carpet mastic
A-015b-R12	15	Room 12	carpet mastic
A-016a-R17	16	Room 17	Yellow caulking
A-016b-R17	16	Room 17	Yellow caulking
A-017a-R03	17	Room 03	Drywall

Method of Shipment:			Sample Condition Upon Receipt:	
Relinquished by: PNL	Date/Time: 8/22/23 14:55		Received by: REC'D SPG 1455 EMSL-BOSTON AUG 22 2023	Date/Time
Relinquished by:	Date/Time:		Received by:	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 132305450

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132305450

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
A-017b-R03	17	Room 03	Drywall
A-039a-R07	39	Room 07	Drywall
A-039b-R07	39	Room 07	Drywall
A-040a-R12	40	Room 12	Drywall
A-040b-R12	40	Room 12	Drywall
A-041a-R14	41	Room 14	Drywall
A-041b-R14	41	Room 14	Drywall
A-042a-R18	42	Room 18	Drywall
A-042b-R18	42	Room 18	Drywall
A-043a-R21	43	Room 21	Drywall
A-043b-R21	43	Room 21	Drywall
A-044a-R34	44	Room 34	Drywall
A-044b-R34	44	Room 34	Drywall
A-018a-N	18	Exterior	Brick mortar
A-018b-W	18	Exterior	Brick mortar
A-018c-S	18	Exterior	Brick mortar
A-019a-R23	19	Room 23	Concrete slab in basement
A-019b-R37	19	Room 37	Concrete slab in basement
A-019c-R28	19	Room 28	Concrete slab in basement
A-020a-R06	20	Room 06	Joint Compound
A-020b-R06	20	Room 06	Joint Compound
A-035a-R07	35	Room 07	Joint Compound
A-035b-R07	35	Room 07	Joint Compound
A-036a-R12	36	Room 12	Joint Compound
A-036b-R12	36	Room 12	Joint Compound

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 08/22/23 18:55	Received by: REC'D SP 1455	Date/Time
Relinquished by:	Date/Time:	Received by: EMSL-BOSTON AUG 22 2023	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 132305450

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132305450

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
A-037a-R14	37	Room 14	Joint Compound
A-037b-R14	37	Room 14	Joint Compound
A-038a-R28	38	Room 28	Joint Compound
A-038b-R28	38	Room 28	Joint Compound
A-021a	21	Exterior	flashing caulk
A-021b	21	Exterior	flashing caulk
A-021c	21	Exterior	flashing caulk
A-022a	22	Exterior	Silver paint
A-022b	22	Exterior	Silver paint
A-022c	22	Exterior	Silver paint
A-023a	23	Exterior	White caulk
A-023b	23	Exterior	White caulk
A-024a	24	Exterior	Light gray caulk
A-024b	24	Exterior	Light gray caulk
A-025a	25	Exterior	Asphalt shingle
A-025b	25	Exterior	Asphalt shingle
A-026a	26	Exterior	Brown roof paper
A-026b	26	Exterior	Brown roof paper
A-045a	45	Exterior	Black roof paper
A-045b	45	Exterior	Black roof paper
A-027a	27	Exterior	Built up tar paper
A-027b	27	Exterior	Built up tar paper
A-028a	28	Exterior	asphalt layer
A-028b	28	Exterior	asphalt layer
A-029a	29	Exterior	rubber roofing membrane

Method of Shipment:			Sample Condition Upon Receipt:	
Relinquished by: PU	Date/Time: 8/22/23 14:55		Received by: REC'D SB 1455	Date/Time
Relinquished by:	Date/Time:		Received by: EMSL-BOSTON AUG 22 2023	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 132305450

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132305450

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
A-029b	29	Exterior	rubber roofing membrane
A-030a	30	Exterior	fiberboard
A-030b	30	Exterior	fiberboard
A-031a	31	Exterior	rubber roofing patch adhesive
A-031b	31	Exterior	rubber roofing patch adhesive
A-031c	31	Exterior	rubber roofing patch adhesive
A-032a	32	Gym	Ceiling panels
A-032b	32	Gym	Ceiling panels
A-033a	33	Exterior	Gray caulk
A-033b	33	Exterior	Gray caulk
A-034a	34	Exterior	built up roofing
A-034b	34	Exterior	built up roofing

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 8/22/23 1455	Received by: REC'D Sep 1455	Date/Time
Relinquished by:	Date/Time:	Received by: EMSL-BOSTON AUG 22 2023	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	132305450
Customer ID:	NOBI51
Customer PO:	
Project ID:	

Attention:	Bridget Fortier	**Phone:**	(978) 683-0891
	Nobis Engineering, Inc.	**Fax:**	(978) 683-0966
	585 Middlesex Street	**Received Date:**	08/22/2023 2:55 PM
	Lowell, MA 01851	**Analysis Date:**	08/29/2023
		Collected Date:	
Project:	St. Johnsbury Armory		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-001A-R22 *132305450-0001*	Room 22 - Yellow Mastic on Concrete	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-001B-R27 *132305450-0002*	Room 27 - Yellow Mastic on Concrete	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-002A-R10 *132305450-0003*	Room 10 - Cellotex Board	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-002B-R06 *132305450-0004*	Room 06 - Cellotex Board	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-003A-R10 *132305450-0005*	Room 10 - Thin Wall Panels	Brown/White Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
A-003B-R16 *132305450-0006*	Room 16 - Thin Wall Panels	Brown/White Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
A-004A-R23 *132305450-0007*	Room 23 - Tile Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-004B-R23 *132305450-0008*	Room 23 - Tile Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-005A-R14 *132305450-0009*	Room 14 - White Sub-Floor Plaster-like Filler	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-005B-R14 *132305450-0010*	Room 14 - White Sub-Floor Plaster-like Filler	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-006A-R5 *132305450-0011*	Room 5 - Gray Adhesive on Brown Paneling	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
A-006B-R5 *132305450-0012*	Room 5 - Gray Adhesive on Brown Paneling				Positive Stop (Not Analyzed)
A-006C-R5 *132305450-0013*	Room 5 - Gray Adhesive on Brown Paneling				Positive Stop (Not Analyzed)
A-007A-R15 *132305450-0014*	Room 15 - Gray Battleship Linoleum	Gray/Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-007B-R15 *132305450-0015*	Room 15 - Gray Battleship Linoleum	Gray/Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-008A-R15 *132305450-0016*	Room 15 - Brown Mastic on Gray Battleship Linoleum	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-008B-R15 *132305450-0017*	Room 15 - Brown Mastic on Gray Battleship Linoleum	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-009A-R23 *132305450-0018*	Room 23 - Ceramic Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-009B-R23 *132305450-0019*	Room 23 - Ceramic Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-010A-R23 *132305450-0020*	Room 23 - Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-010B-R23 *132305450-0021*	Room 23 - Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-011A-R34 *132305450-0022*	Room 34 - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-011B-R27 *132305450-0023*	Room 27 - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-011C-R27 *132305450-0024*	Room 27 - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-012A-R20 *132305450-0025*	Room 20 - Sprinkler Fitting Thread Sealant	Gray Non-Fibrous Homogeneous	2% Fibrous (Other)	98% Non-fibrous (Other)	None Detected
A-012B-R21 *132305450-0026*	Room 21 - Sprinkler Fitting Thread Sealant	Gray Non-Fibrous Homogeneous	2% Fibrous (Other)	98% Non-fibrous (Other)	None Detected
A-013A-R18 *132305450-0027*	Room 18 - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
A-013B-R18 *132305450-0028*	Room 18 - Black Mastic				Positive Stop (Not Analyzed)
A-014A-R13 *132305450-0029*	Room 13 - Beige Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-014B-R14 *132305450-0030*	Room 14 - Beige Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-015A-R12 *132305450-0031*	Room 12 - Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-015B-R12 *132305450-0032*	Room 12 - Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-016A-R17 *132305450-0033*	Room 17 - Yellow Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-016B-R17 *132305450-0034*	Room 17 - Yellow Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-017A-R03 *132305450-0035*	Room 03 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-017B-R03 *132305450-0036*	Room 03 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-039A-R07 *132305450-0037*	Room 07 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-039B-R07 *132305450-0038*	Room 07 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-040A-R12 *132305450-0039*	Room 12 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-040B-R12 *132305450-0040*	Room 12 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose 2% Glass	83% Non-fibrous (Other)	None Detected
A-041A-R14 *132305450-0041*	Room 14 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-041B-R14 *132305450-0042*	Room 14 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-042A-R18 *132305450-0043*	Room 18 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-042B-R18 *132305450-0044*	Room 18 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-043A-R21 *132305450-0045*	Room 21 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-043B-R21 *132305450-0046*	Room 21 - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-044A-R34 *132305450-0047*	Room 34 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-044B-R34 *132305450-0048*	Room 34 - Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
A-018A-N *132305450-0049*	Exterior - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-018B-W *132305450-0050*	Exterior - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-018C-S *132305450-0051*	Exterior - Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-019A-R23 *132305450-0052*	Room 23 - Concrete Slab in Basement	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-019B-R37 *132305450-0053*	Room 37 - Concrete Slab in Basement	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-019C-R28 *132305450-0054*	Room 28 - Concrete Slab in Basement	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-020A-R06 *132305450-0055*	Room 06 - Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-020B-R06 *132305450-0056*	Room 06 - Joint Compound				Positive Stop (Not Analyzed)
A-035A-R07 *132305450-0057*	Room 07 - Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-035B-R07 *132305450-0058*	Room 07 - Joint Compound				Positive Stop (Not Analyzed)
A-036A-R12 *132305450-0059*	Room 12 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-036B-R12 *132305450-0060*	Room 12 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-037A-R14 *132305450-0061*	Room 14 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-037B-R14 *132305450-0062*	Room 14 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-038A-R28 *132305450-0063*	Room 28 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-038B-R28 *132305450-0064*	Room 28 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-021A *132305450-0065*	Exterior - Flashing Caulk	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-021B *132305450-0066*	Exterior - Flashing Caulk				Positive Stop (Not Analyzed)
A-021C *132305450-0067*	Exterior - Flashing Caulk				Positive Stop (Not Analyzed)
A-022A *132305450-0068*	Exterior - Silver Paint	Black/Silver Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-022B *132305450-0069*	Exterior - Silver Paint				Positive Stop (Not Analyzed)
A-022C *132305450-0070*	Exterior - Silver Paint				Positive Stop (Not Analyzed)
A-023A *132305450-0071*	Exterior - White Caulk	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-023B *132305450-0072*	Exterior - White Caulk				Positive Stop (Not Analyzed)
A-024A *132305450-0073*	Exterior - Light Gray Caulk	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-024B *132305450-0074*	Exterior - Light Gray Caulk				Positive Stop (Not Analyzed)
A-025A *132305450-0075*	Exterior - Asphalt Shingle	Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-025B *132305450-0076*	Exterior - Asphalt Shingle	Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
A-026A *132305450-0077*	Exterior - Brown Roof Paper	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-026B *132305450-0078*	Exterior - Brown Roof Paper	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-045A *132305450-0079*	Exterior - Black Roof Paper	Black Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-045B *132305450-0080*	Exterior - Black Roof Paper	Black Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-027A *132305450-0081*	Exterior - Built-up Tar Paper	Black Non-Fibrous Homogeneous	25% Cellulose	65% Non-fibrous (Other)	10% Chrysotile
A-027B *132305450-0082*	Exterior - Built-up Tar Paper				Positive Stop (Not Analyzed)
A-028A *132305450-0083*	Exterior - Asphalt Layer	Black Non-Fibrous Homogeneous	10% Cellulose	84% Non-fibrous (Other)	6% Chrysotile
A-028B *132305450-0084*	Exterior - Asphalt Layer				Positive Stop (Not Analyzed)
A-029A *132305450-0085*	Exterior - Rubber Roofing Membrane	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-029B *132305450-0086*	Exterior - Rubber Roofing Membrane	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-030A *132305450-0087*	Exterior - Fiberboard	Brown/Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
A-030B *132305450-0088*	Exterior - Fiberboard	Brown/Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
A-031A *132305450-0089*	Exterior - Rubber Roofing Patch Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-031B *132305450-0090*	Exterior - Rubber Roofing Patch Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-031C *132305450-0091*	Exterior - Rubber Roofing Patch Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-032A *132305450-0092*	Gym - Ceiling Panels	Brown/Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected

Initial report from: 08/29/2023 14:49:48

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132305450
Customer ID: NOBI51
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
A-032B *132305450-0093*	Gym - Ceiling Panels	Brown/Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
A-033A *132305450-0094*	Exterior - Gray Caulk	Gray/Black/Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-033B *132305450-0095*	Exterior - Gray Caulk	Gray/Black/Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-034A *132305450-0096*	Exterior - Built-up Roofing	Black Fibrous Homogeneous	35% Cellulose	63% Non-fibrous (Other)	2% Chrysotile
A-034B *132305450-0097*	Exterior - Built-up Roofing				Positive Stop (Not Analyzed)

Analyst(s)
Ava Kopellas (12)
John McCarthy (71)

Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 08/29/2023 14:49:48

Appendix D – Structural Letter from Structural Design Engineer

ENGINEERING VENTURES PC

MEMO

Burlington, VT ▪ Lebanon, NH ▪ Schenectady, NY

Date: January 11, 2024

To: David Roy, AIA, Principal
Wiemann Lamphere Architects
DRoy@Wiemannlamphere.com

From: James Hoepker, P.E.

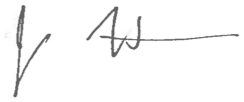
Re: St. Johnsbury Armory
Foundation Walls

This memo will serve as our opinion regarding remediation options for foundations walls in the existing building for PCB paint.

It is our understanding that two options for remediation include removal and replacement of an inner portion of the foundation wall in the basement or provide a coating to encapsulate the paint. It is our opinion that while the removal and replacement of part of the foundation wall is structurally possible, it is not financially prudent. The work would involve providing temporary shoring of the entire structure, while portions of the walls are removed and replaced. The work involved in providing the scope of removal and replacement would be prohibitive to the budget of the project.

Please feel free to reach out with any questions.

Regards,



James Hoepker, P.E.

Appendix E – Asbestos General Work Practices

GENERAL WORK PRACTICE REQUIREMENTS

1. DELIVERY OF EQUIPMENT
   All equipment and materials brought on to Owner's property by Contractor shall be free of visible dust, dirt, debris, and residue. All smooth surfaces of equipment and materials shall have been previously cleaned, off-site. All porous surfaces of equipment shall be sealed airtight at all times, until the equipment is in use inside the properly established abatement work area. All equipment openings which allow access to asbestos filtration materials including, but not limited to, hepa vacuum intake hoses and negative pressure filtration unit air intakes, shall be sealed airtight at all times until the equipment is in use inside the properly established abatement work area.

2. SIGNAGE
   Contractor shall post danger asbestos signs at all locations and approaches to any location where airborne fibers may be expected to exceed background levels in accordance with VOSHA 29 CFR 1926.1101. This shall include, but not be limited to, posting the personnel decontamination structure, waste load-out structure, and areas at the exterior of the building where negative pressure filtration unit exhaust ducts are located. Danger asbestos signs shall be posted in a manner that allows any individual around the abatement work area the opportunity to avoid entering the abatement work area. Danger asbestos signs shall be posted prior to the start of any work related to setup of the abatement work area.

3. PRE-CLEANING
   Contractor shall pre-clean all accessible surfaces within the abatement work area until free of visible dust, dirt, debris, or residue using wet cleaning methods and/or hepa vacuuming techniques. Contractor shall only use vacuums equipped with proper hepa filtration.

4. WORKER DECONTAMINATION STRUCTURE
   Contractor shall construct a worker decontamination enclosure system. The structure shall be used as the only means of entrance/exit to and from the abatement work area throughout the duration of the Project, unless an emergency situation exists. The structure shall be adjacent, but attached to, the abatement work area. The structure shall, at a minimum, be constructed according to VOSHA 29 CFR 1926.1101. Construction shall include, but not be limited to, construction of a clean room, shower room, and equipment room, each separated by three foot airlocks, with curtained doorways consisting of overlapping sheeting separating each airlock or chamber. The equipment room shall be located closest to the abatement work area. The shower room shall be between the equipment room and clean room. These rooms shall be large enough to allow proper personnel decontamination and personnel privacy. The decontamination structure, including the walls and ceiling, shall be constructed with a minimum of two (2) layers of 6 mil sheeting. The floor of

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

WORKER DECONTAMINATION STRUCTURE (cont.)
the decontamination structure shall be constructed with a minimum of three (3) layers of 6 mil sheeting. The inside of the entire decontamination structure shall not be visible from anywhere outside of the structure. The clean room shall be used as an employee change area where street clothes shall be taken off and protective clothing shall be put on. The clean room shall not be used for storage of tools, equipment, or materials. Proper storage facilities for respirators and personal belongings, i.e., lockers, shall be available in the clean room. No asbestos contaminated items or individuals shall enter the clean room, or airlock between the shower and clean room, throughout the duration of the Project.

The shower room shall be constructed to prevent water leakage at any time. A minimum of three layers of 6 mil sheeting and one layer of absorbent towels (placed between the top and middle layers of sheeting) shall be placed under the floor of the shower room. The shower shall have a mounted shower head and supply adequate, continuous water pressure (hot and cold water) so as to allow individuals to properly decontaminate. The shower shall have adjustable controls so each individual can regulate the shower water temperature. Contractor shall supply a portable hot water heater, connect it to the shower, and ensure that the shower shall supply an adequate amount of hot water in order to allow for proper personnel decontamination. Contractor shall supply an adequate amount of soap, shampoo, and towels to all employees, Owner, Owner's Representative, and authorized visitors throughout the duration of the Project. All waste water generated during personnel decontamination shall be, at minimum, filtered through a 5 micron asbestos water filter prior to disposal in the municipal waste water system, or disposed of as asbestos waste.

Contractor shall maintain two logbooks within the clean room of the worker decontamination structure at all times the decontamination structure shall be in use. One logbook shall document the name, employer, work title, date, time into the abatement work area and time out of the abatement work area for all individuals who enter the abatement work area for any purpose at any time throughout the duration of the Project. The other logbook shall document the name, employer, work title and date for all individuals who visit the work site for any purpose at any time throughout the duration of the Project.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

5. WASTE LOAD-OUT STRUCTURE

Contractor may construct a two chamber structure to be used for asbestos waste load out. If the waste load-out structure is utilized it shall be adjacent, but attached to, the abatement work area. The structure shall be constructed in a similar fashion as the worker decontamination structure, including, but not limited to, sheeting and curtained doorways. The waste load-out structure shall have a water source for decontaminating disposal containers prior to pass out from the waste load-out structure. All waste water generated during asbestos waste container decontamination shall be, at minimum, filtered through a 5 micron asbestos water filter prior to disposal in the municipal waste water system, or disposed of as asbestos waste. If a waste load-out structure is utilized, all asbestos disposal containers generated by Contractor during the Project shall exit the abatement work area through the waste load-out structure. Contractor shall not pass any asbestos waste through the decontamination structure at any time throughout the duration of the Project. No individual shall enter or exit the abatement work area through the waste load-out structure at any time throughout the duration of the Project.

6. CRITICAL BARRIERS

Contractor shall construct airtight critical barriers across all openings between the abatement work area and air spaces outside of the abatement work area. Contractor shall construct airtight critical barriers around all immovable objects that do not contain asbestos, have been pre-cleaned, and must remain in the abatement work area. Critical barrier locations shall include, but not be limited to, doors, windows, heating, air conditioning, and ventilation system ductwork, grills, grates, drains, pipe chases, holes, and machinery.

A minimum of one layer of 6 mil sheeting and/or waterproof tape shall be used to construct all critical barriers. Expandable spray foam may be used to obtain an air tight seal across small openings. All expandable foam shall be approved for use by Underwriter's Laboratories, shall not contain formaldehyde, and shall have a smoke developed rating of 25 or less. All sheeting critical barriers which can not be directly attached to an existing wall, floor, ceiling, or duct surface shall be attached to a secure temporary framework adequate to ensure that critical barriers do not breach or become damaged at any time throughout the duration of the Project. All sheeting critical barriers that are larger than 32 square feet shall be attached to a secure temporary framework adequate to ensure that critical barriers do not breach or become damaged at any time throughout the duration of the Project.

All surfaces that shall become part of a critical barrier, or shall be behind a critical barrier, shall be cleaned until there is no visible dust, dirt, debris, or residue using hepa equipped vacuums and wet cleaning methods prior to construction of the critical barrier.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

CRITICAL BARRIERS (cont.)
Contractor shall not construct any critical barriers which will directly contact or be attached to asbestos containing materials.

Contractor shall inspect all critical barriers in the abatement work area, at least two times per day. At a minimum, barrier inspection shall occur prior to the start of each day's activities, and following completion of each day's activities. Contractor shall notify Owner's Representative of the results of each inspection and document these results. Contractor shall immediately repair all breaches or damage to critical barriers.

At all times throughout the duration of the Project, Contractor shall stop work and immediately repair any breach or damage to critical barriers upon discovery of any breach or damage.

7. CRITICAL BARRIER INSPECTION
Owner's Representative shall perform a comprehensive inspection of Contractor's setup of critical barriers in and around the abatement work area. The inspection shall be performed prior to construction of any containment barriers. The Contractor's Supervisor shall be present with Owner's Representative during this inspection. The inspection may include performance of a smoke test to assess the integrity of the critical barriers and determine air flow patterns and velocity in the abatement work area. Contractor shall immediately correct any discrepancies in critical barrier construction as requested by Owner's Representative.

8. CONTAINMENT BARRIERS
Contractor shall construct airtight containment barriers on all walls, floors, and ceilings of the abatement work area. All walls and ceilings shall be covered with a minimum of one layer of 6 mil sheeting. All floors shall be covered with a minimum of two layers of 6 mil sheeting (totaling, at minimum, 12 mils). All containment barriers shall be constructed in a manner that prevents slippage, minimizes seams, and prevents water leakage. All containment barriers shall be located, sized, and seamed in accordance with all applicable Federal and State regulations.

Contractor shall inspect all containment barriers in the abatement work area, including the personnel decontamination structure, at least two times per day. At a minimum, containment barrier inspection shall occur prior to the start of each day's activities, and following completion of each day's activities. Contractor shall notify Owner's Representative of the results of each inspection and document these results. Contractor shall immediately repair all breaches or damage to containment barriers which are found during the containment barrier inspection. At all times throughout the duration of the Project, Contractor shall stop work and immediately repair any breach or damage to containment barriers upon discovery of any breach or damage.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

9. NEGATIVE PRESSURE DIFFERENTIAL/FILTRATION

Contractor shall establish an adequate negative pressure differential between the abatement work area and the area directly outside the abatement work area in order to maintain a negative pressure differential of at least .03 inches, water column. An adequate negative pressure differential shall be maintained until proper completion of the Project clearance activity. In addition, negative pressure units equipped with hepa filtration shall provide one complete air change (filtration) within the abatement work area at least once every 10 minutes. All air exhausted from the negative pressure filtration units shall flow directly into air spaces outside of the building. Negative pressure filtration units shall, at minimum, be installed, used, and maintained according to the manufacturer's specifications and EPA 560/5-85-024, Guidance for Controlling Asbestos Containing Materials in Buildings.

Contractor shall provide an on-site instrument which measures the pressure differential between the abatement work area and the air space adjacent to the abatement work area. This instrument shall have a direct reading feature, a high and low limit audible alarm, and recording strip chart to provide a permanent record of the negative pressure differential whenever use of negative pressure filtration units is required. The instrument shall be accessible from outside the abatement work area to Owner, Owner's Representative, and authorized visitors throughout the duration of the Project. Contractor shall initially calibrate the pressure differential monitor and ensure that the instrument is properly calibrated at all times. Contractor shall indicate the day, date, and time on the strip chart upon arrival to and exit from the Project area at all times negative pressure filtration is required.

Contractor shall have at least one additional negative pressure filtration unit inside the abatement work area whenever use of negative pressure filtration units is required. All parts of each negative pressure filtration unit shall be located completely within the abatement work area boundaries.

10. INSPECTION OF SETUP PROCEDURES

Upon completion of all setup procedures, Contractor shall notify Owner's Representative. Contractor shall not begin to remove, enclose, or encapsulate any asbestos material at any time before this notification has been provided. Owner's Representative shall perform a comprehensive inspection of Contractor's setup in and around the abatement work area. Contractor's Supervisor shall be present with Owner's Representative during this inspection. The inspection may include performance of a smoke test to assess the integrity of the containment or critical barriers and determine air flow patterns and velocity in the abatement work area. Contractor shall immediately correct any discrepancies as requested by Owner's Representative.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

11. ASBESTOS ABATEMENT

Contractor shall remove all asbestos materials in the abatement work area using proper wet methods and housekeeping techniques which are detailed in applicable Federal and State regulations. All asbestos material shall be adequately wet at all times and shall not be allowed to accumulate on the floor or other surfaces of the abatement work area.

Whenever possible, asbestos materials shall be removed in large sections with minimal breakage or disturbance. Asbestos materials shall be carefully lowered to the floor and shall not be dropped or thrown. Amended water shall be used at all times. Water shall not be allowed to accumulate on the floor or other surfaces of the abatement work area.

All pipe dope on thermal system components (with the exception of obvious Teflon tape) shall be considered asbestos containing and/or asbestos contaminated and shall be properly removed by Contractor.

Cutting, bending, or removal of any conduit, wire, or other building system component shall not occur without prior approval from Owner or Owner's Representative.

12. CONTAINERIZATION/STORAGE OF ASBESTOS WASTE

Contractor shall place all asbestos waste material into containers that are labeled according to applicable Federal and State Regulations. Containers shall be adequate to prevent puncturing or ripping by asbestos and non-asbestos waste. If material is bagged, the container shall consist of a minimum of two 6 mil bags and shall be sealed airtight. All air within the container shall be removed from the container by hepa vacuuming methods. Both bags shall be "goosenecked" (i.e., completely sealed) to discourage leakage of water. Fiber drums shall be lined with a minimum of two 6 mil poly bags and material inside the drum shall be sealed airtight.

All material shall be adequately wet when placed into the disposal container. Accumulated asbestos waste shall be removed from the abatement work area each day. No asbestos waste shall be stored in the abatement work area overnight.

Asbestos waste shall only be stored in the on-site storage/transportation container or properly transported off-site and shall never be stored in another location on or off of Owner's property without prior approval of Owner. Contractor shall properly label the on-site storage container whenever asbestos waste containers are being placed into the on-site storage container.

All containerized asbestos waste shall be removed from the abatement work area prior to the start of the final visual inspection by the Owner's Representative.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

13. INITIAL CLEANING
Upon completion of removal and containerization, Contractor shall clean all surfaces in the entire abatement work area, including but not limited to, the decontamination structure, waste load out structure, containment barriers, and thermal system components, using wet cleaning methods and/or hepa filter equipped vacuum cleaners. Pressure washers shall not be used at any time to perform cleaning activities.

Contractor shall only use vacuums equipped with proper hepa filtration. Contractor shall not apply paint, an encapsulant/lockdown material, or any other coating or covering to any thermal system component or other surface within the abatement work area at any time throughout the duration of the Project.

14. INITIAL VISUAL INSPECTION
Upon completion of initial cleaning, Owner's Representative shall perform an initial visual inspection to determine if there is any visible dust, dirt, debris, or residue on any surfaces in the abatement work area. The Contractor's Supervisor shall be present with Owner's Representative during this inspection. Contractor shall re-clean all areas which have dust, dirt, debris, or residue, at the request of Owner's Representative.

15. TAKEDOWN OF CONTAINMENT BARRIERS
Upon completion of the initial visual inspection, Contractor shall remove all containment barriers from the walls and floor. All critical barriers shall remain in place. Containment barriers shall be considered asbestos contaminated and containerized and disposed of properly.

16. CLEANING OF THE ABATEMENT WORK AREA
Contractor shall clean all surfaces in the entire abatement work area, including but not limited to, the decontamination structure, waste load-out structure, critical barriers, exposed walls, floor, and ceiling, and thermal system components, until there is no visible dust, dirt, debris, or residue using wet cleaning methods and/or hepa filter equipped vacuum cleaners. Upon completion of cleaning, all surfaces shall be allowed to dry. Pressure washers shall not be used at any time to perform cleaning activities.

Contractor shall only use vacuums equipped with proper hepa filtration. Contractor shall not apply paint to any thermal system component or other surface within the abatement work area at any time throughout the duration of the Project.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

17. VISUAL INSPECTION

Owner's Representative shall perform a visual inspection of all surfaces in the entire abatement work area, including the decontamination structure and waste load-out structure for any visible dust, dirt, debris, or residue. In addition, Owner's Representative shall perform a touch test of surfaces to ensure no dust, dirt, debris, or residue can be felt on any surfaces. Prior to performance of the visual inspection, all surfaces in the abatement work area shall be dry. Contractor's Supervisor shall be present with Owner's Representative during the visual inspection. Contractor shall re-clean all areas which have visible dust, dirt, debris, or residue, at the request of Owner's Representative, until there is no visible dust, dirt, debris, or residue in the abatement work area.

18. CLEARANCE AIR MONITORING/ANALYSIS

Upon successful completion of the final visual inspection, Owner's Representative shall collect clearance air samples utilizing aggressive collection methods in accordance with VRAC. Clearance air samples shall be analyzed by a Vermont certified analytical service and analyst using Phase Contrast Microscopy (PCM).

The abatement work area shall be considered adequately clean at the completion of a comprehensive visual inspection (i.e., no visible dust, dirt, debris, or residue in the abatement work area), and after all clearance air samples which were collected indicate acceptable airborne fiber levels at the time of air sample collection in accordance with VRAC. Contractor shall re-clean the entire abatement work area for retesting if the above referenced clearance air monitoring criteria is not met.

19. REMOVAL OF CRITICAL BARRIERS

Upon successful completion of the clearance procedure, Contractor shall remove all critical barriers from the abatement work area. Contractor shall also remove the decontamination structure and waste load-out structure and restore the abatement work area to at least the condition as originally found. All critical barriers and decontamination structure barriers shall be considered asbestos contaminated and shall be containerized and disposed of properly.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

20. STORAGE/TRANSPORTATION OF ASBESTOS WASTE
Contractor shall properly containerize and remove from Owner's property all asbestos waste generated during the Project. All waste stored on-site prior to transport shall be stored in a secure, locked storage/transportation container, placed in a location acceptable to Owner and Owner's Representative.

Contractor shall transport all asbestos waste according to applicable Federal, State and Local regulations. Contractor shall maintain paperwork in accordance with all applicable Federal, State and Local regulations. Transportation forms shall itemize the specific number of containers (i.e., bags or drums) and total cubic yards of waste material that was generated during the Project and removed from Owner's property.

21. DISPOSAL OF ASBESTOS WASTE
Contractor shall properly dispose of all asbestos waste that is generated during the Project in accordance with all applicable Federal, State and Local regulations. The landfill facility shall be approved by Federal State and Local authorities to accept asbestos waste.

Contractor shall provide documentation of disposal form(s) to Owner and Owner's Representative no later than thirty (30) calendar days after release from on-site obligations. The form shall be signed and dated by a representative of the landfill and shall itemize the specific number of containers (i.e., bags or drums) and total cubic yards of waste material which were generated and received at the landfill.

All waste water generated by Contractor during the Project shall be disposed of properly as asbestos waste or properly filtered prior to discharge into the municipal waste water system. At minimum, a 5 micron filter fabric for asbestos shall be used for water filtration.

22. FINAL INSPECTION
Owner, Owner's Representative, and Contractor's Supervisor shall perform a final inspection in and around the abatement work area prior to formal release of Contractor. Contractor shall correct any deficiencies at Owner's request.

23. CONTRACTOR RELEASE FROM ON-SITE OBLIGATIONS
Upon satisfactory completion of Owner's final inspection, Contractor shall be informed of preliminary release from on-site obligations by Owner. Contractor shall not be released from on-site obligations until all asbestos waste, apparatus, equipment, materials, critical barriers, and containment barriers have been removed from Owner's property. At this time, Contractor's on-site obligations shall be considered complete.

GENERAL WORK PRACTICE REQUIREMENTS (cont.)

24. CONTRACTOR'S PROJECT CLOSURE REPORT
Contractor shall provide Owner and Owner's Representative with a project closure report in accordance with the Project Timetable. At minimum, this report shall include the following:

- All notifications/permits/licenses and other documentation related to the planning phase of the Project.
- All qualification certificates, licenses, accreditation documents, medical monitoring documents, and fit test forms of Contractor and all Contractor employees who participated in the Project.
- Written respiratory protection program.
- Material Safety Data sheets of all hazardous materials/substances used during the Project.
- Strip chart recordings of the negative pressure differential maintained throughout the duration of the Project.
- Sign-in/Sign-out logs for entrance to/exit from the abatement work area.
- Daily written Supervisor logs.
- Personnel air monitoring data, including negative exposure assessment data.

Appendix F – Proposed Encapsulant Information

Retro-Coat Standard Primer Part A

Land Science, a division of REGENESIS

Version No: **3.3**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **04/24/2023**
Print Date: **04/24/2023**
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Retro-Coat Standard Primer Part A
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Specialty Floor Resin

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Land Science, a division of REGENESIS**
Address	1011 Calle Sombra San Clemente CA 92673 United States
Telephone	949-481-8118
Fax	949-366-8090
Website	landsciencetech.com
Email	CustomerService@LandScienceTech.com

Emergency phone number

Association / Organisation	**CHEMTREC 24/7**
Emergency telephone numbers	1-800-424-9300 (USA and Canada)
Other emergency telephone numbers	1-703-527-3887 (International

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Skin Corrosion/Irritation Category 1C, Serious Eye Damage/Eye Irritation Category 1, Sensitisation (Skin) Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 3

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.

Page 1 continued...

H412	Harmful to aquatic life with long lasting effects.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P273	Avoid release to the environment.
P272	Contaminated work clothing must not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician/first aider.
P363	Wash contaminated clothing before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement(s) Storage

P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	30-60	polyamine adduct
112-57-2*	1-5	tetraethylenepentamine
9046-10-0*	1-5	bis(2-aminopropyl ether) propoxylated

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Immediately hold eyelids apart and flush the eye continuously with running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▸ Transport to hospital or doctor without delay. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▸ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▸ Quickly remove all contaminated clothing, including footwear. ▸ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▸ Transport to hospital, or doctor.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor.
Ingestion	▸ For advice, contact a Poisons Information Centre or a doctor at once. ▸ Urgent hospital treatment is likely to be needed. ▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Continued...

	▸ Transport to hospital or doctor without delay.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Special protective equipment and precautions for fire-fighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. May emit poisonous fumes. May emit corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	▸ Remove all ignition sources. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes.
Major Spills	Moderate hazard. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	None known

SECTION 8 Exposure controls / personal protection

Control parameters

Continued...

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
tetraethylenepentamine	15 mg/m3	130 mg/m3	790 mg/m3
bis(2-aminopropyl ether) propoxylated	4.8 mg/m3	53 mg/m3	320 mg/m3

Ingredient	Original IDLH	Revised IDLH
polyamine adduct	Not Available	Not Available
tetraethylenepentamine	Not Available	Not Available
bis(2-aminopropyl ether) propoxylated	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
polyamine adduct	D	> 0.1 to ≤ 1 ppm
tetraethylenepentamine	E	≤ 0.1 ppm
bis(2-aminopropyl ether) propoxylated	E	≤ 0.1 ppm
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.
Individual protection measures, such as personal protective equipment	
Eye and face protection	‣ Chemical goggles. ‣ Full face shield may be required for supplementary but never for primary protection of eyes. ‣ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber ‣ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. **NOTE:** ‣ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ‣ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron. ‣ Barrier cream.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Epoxy resins are thermosetting polymers, which are crosslinked using hardeners (curing agents). Epoxy is either any of the basic components or the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resins, also known as polyepoxides, are a class of reactive prepolymers and polymers which contain at least two epoxide groups. The epoxide group is also sometimes referred to as a glycidyl or oxirane group.. Epoxy resins may be reacted (cross-linked) either with themselves through catalytic homopolymerisation, or with a wide range of co-reactants including polyfunctional amines, acids (and acid anhydrides), phenols, alcohols and thiols. Reactive diluents are generally colourless to yellow/ amber, low viscosity liquids with mild ether-like odour; solubility in water varies across the family. Substitution on the phenolic rings may generate solids. Reactive diluents may contain trace residuals of epichlorohydrin a known skin irritant. Light sensitive.

Continued...

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	93.3	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	<5 g/L when mixed as intended

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material has **NOT** been classified by EC Directives or other classification systems as "harmful by inhalation" nor has it been designated as "irritating to the respiratory system". This is because of the lack of corroborating animal or human evidence.
Ingestion	The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The material can produce chemical burns following direct contact with the skin. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.

Retro-Coat Standard Primer Part A	**TOXICITY**	**IRRITATION**
	Not Available	Not Available

Continued...

polyamine adduct	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
tetraethylenepentamine	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 660 mg/kg[2]	Eye (rabbit): 100 mg/24h moderate
	Oral (Rat) LD50: 3990 mg/kg[2]	Eye (rabbit): 5 mg moderate
		Skin (rabbit): 495 mg SEVERE
		Skin (rabbit): 5 mg/24h SEVERE
bis(2-aminopropyl ether) propoxylated	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 250 mg/kg ***[2]	Eye (rabbit): 100 mg - SEVERE
	Dermal (rabbit) LD50: 360 mg/kg[2]	Eye (rabbit): SEVERE *** 94/110
	Dermal (rabbit) LD50: 670 mg/kg **[2]	Eye: adverse effect observed (irreversible damage)[1]
	Dermal (rabbit) LD50: 760 mg/kg *[2]	Skin (rabbit): SEVERE *** 6.8/8.0
	Dermal (rabbit) LD50: 760 mg/kg ****[2]	Skin: adverse effect observed (corrosive)[1]
	Inhalation(Rat) LC50: >2 mg/l *[2]	
	Oral (Rat) LD50: 1600 mg/kg ****[2]	
	Oral (Rat) LD50: 1660 mg/kg *[2]	
	Oral (Rat) LD50: 242 mg/kg[2]	
	Oral (Rat) LD50: 670 mg/kg **[2]	
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

tetraethylenepentamine	Ethyleneamines are very reactive and can cause chemical burns, skin rashes and asthma-like symptoms. It is readily absorbed through the skin and may cause eye blindness and irreparable damage. As such, they require careful handling. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. For alkyl polyamines: The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexanediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer. Triethylenetetramine is a severe irritant to skin and eyes and may induce skin sensitisation. Acute exposure to saturated vapour via inhalation was tolerated without impairment but exposure to aerosol may lead to reversible irritations of the mucous membranes in the airways. Studies done on experimental animals showed that it does not cause cancer or foetal developmental defects. Tetraethylenepentamine (TEPA) has a low acute toxicity when taken orally and a higher toxicity via the dermal route most likely due to the corrosive nature of TEPA to the skin against neutralization by stomach acid. TEPA may be corrosive to the skin and eyes. Long term dermal application may cause thickening of the epidermis and other skin changes.
bis(2-aminopropyl ether) propoxylated	Convulsions, stomach ulceration, haemorrhage, respiratory tract changes, dermatitis after systemic administration recorded. * Reichard ** Bayer Inc. Canada *** Texaco ****Epoxylite Polyethers (such as ethoxylated surfactants and polyethylene glycols) are highly susceptible to being oxidized in the air. They then form complex mixtures of oxidation products. Animal testing reveals that whole the pure, non-oxidised surfactant is non-sensitizing, many of the oxidation products are sensitisers. The oxidization products also cause irritation. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Overexposure to most of these materials may cause adverse health effects. Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient. There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing. Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs. Higher concentrations of certain amines can produce severe respiratory irritation, characterized by discharge from the nose, coughing, difficulty in breathing and chest pain.
Retro-Coat Standard Primer Part A & tetraethylenepentamine	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.
tetraethylenepentamine & bis(2-aminopropyl ether) propoxylated	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✓	**Reproductivity**	✗
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Continued...

Legend: *– Data either not available or does not fill the criteria for classification*
– Data available to make classification

SECTION 12 Ecological information

Toxicity

Retro-Coat Standard Primer Part A	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
polyamine adduct	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
tetraethylenepentamine	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	EC50	72h	Algae or other aquatic plants	2.1mg/l	1
	EC50	48h	Crustacea	24.1mg/l	1
	NOEC(ECx)	72h	Algae or other aquatic plants	0.5mg/l	1
bis(2-aminopropyl ether) propoxylated	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	NOEC(ECx)	72h	Algae or other aquatic plants	0.32mg/l	2
	EC50	72h	Algae or other aquatic plants	2.1mg/l	2
	EC50	48h	Crustacea	80mg/l	2
	LC50	96h	Fish	772.14mg/l	2
Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*				

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
tetraethylenepentamine	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
tetraethylenepentamine	LOW (LogKOW = -3.1604)

Mobility in soil

Ingredient	Mobility
tetraethylenepentamine	LOW (KOC = 1098)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Management Authority for disposal. ▸ Bury residue in an authorised landfill.

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as

Continued...

Dangerous Goods in Excepted Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
polyamine adduct	Not Available
tetraethylenepentamine	Not Available
bis(2-aminopropyl ether) propoxylated	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
polyamine adduct	Not Available
tetraethylenepentamine	Not Available
bis(2-aminopropyl ether) propoxylated	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

polyamine adduct is found on the following regulatory lists

Not Applicable

tetraethylenepentamine is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals
US AIHA Workplace Environmental Exposure Levels (WEELs)
US DOE Temporary Emergency Exposure Limits (TEELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

bis(2-aminopropyl ether) propoxylated is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

Continued...

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65

None listed

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (tetraethylenepentamine; bis(2-aminopropyl ether) propoxylated)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (bis(2-aminopropyl ether) propoxylated)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

SECTION 16 Other information

Revision Date	04/24/2023
Initial Date	06/18/2022

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
2.3	04/24/2023	Toxicological information - Acute Health (eye), Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Acute Health (swallowed), Toxicological information - Chronic Health, Hazards identification - Classification, Exposure controls / personal protection - Engineering Control, Ecological Information - Environmental, First Aid measures - First Aid (inhaled), First Aid measures - First Aid (skin), First Aid measures - First Aid (swallowed), Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (eye), Exposure controls / personal protection - Personal Protection (hands/feet)

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

Powered by AuthorITe, from Chemwatch.

Retro-Coat Standard Primer Part B

Land Science, a division of REGENESIS

Version No: **2.2**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **04/17/2023**
Print Date: **04/17/2023**
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Retro-Coat Standard Primer Part B
Synonyms	Not Available
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Specialty Flooring Curative

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Land Science, a division of REGENESIS**
Address	1011 Calle Sombra San Clemente CA 92673 United States
Telephone	949-481-8118
Fax	949-366-8090
Website	landsciencetech.com
Email	CustomerService@LandScienceTech.com

Emergency phone number

Association / Organisation	**CHEMTREC 24/7**
Emergency telephone numbers	**1-800-424-9300 (USA and Canada)**
Other emergency telephone numbers	**1-703-527-3887 (International**

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Reproductive Toxicity Category 1A, Hazardous to the Aquatic Environment Long-Term Hazard Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2, Skin Corrosion/Irritation Category 2, Germ Cell Mutagenicity Category 2, Sensitisation (Skin) Category 1B

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

H360	May damage fertility or the unborn child.

Page 1 continued...

H411	Toxic to aquatic life with long lasting effects.
H373	May cause damage to organs through prolonged or repeated exposure.
H315	Causes skin irritation.
H341	Suspected of causing genetic defects.
H317	May cause an allergic skin reaction.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves and protective clothing.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash all exposed external body areas thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s) Storage

P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
25085-99-8	80-100	bisphenol A diglycidyl ether polymer
2210-79-9	1-5	o-cresyl glycidyl ether

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.

Continued...

Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor.
Ingestion	▸ **IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.** ▸ For advice, contact a Poisons Information Centre or a doctor. ▸ Urgent hospital treatment is likely to be needed. ▸ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▸ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ▸ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. **Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:** ▸ **INDUCE** vomiting with fingers down the back of the throat, **ONLY IF CONSCIOUS**. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. **NOTE:** Wear a protective glove when inducing vomiting by mechanical means.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).
For poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994
Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- Foam.
- Dry chemical powder.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. Combustion products include: carbon dioxide (CO_2) aldehydes other pyrolysis products typical of burning organic material.

SECTION 6 Accidental release measures

Continued...

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	▸ In the event of a spill of a reactive diluent, the focus is on containing the spill to prevent contamination of soil and surface or ground water. ▸ If irritating vapors are present, an approved air-purifying respirator with organic vapor canister is recommended for cleaning up spills and leaks. Environmental hazard - contain spillage. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes.
Major Spills	Environmental hazard - contain spillage. Industrial spills or releases of reactive diluents are infrequent and generally contained. If a large spill does occur, the material should be captured, collected, and reprocessed or disposed of according to applicable governmental requirements. Moderate hazard. ▸ Clear area of personnel and move upwind.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	▸ Store in original containers. ▸ Keep containers securely sealed.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	In general, uncured epoxy resins have only poor mechanical, chemical and heat resistance properties. However, good properties are obtained by reacting the linear epoxy resin with suitable curatives to form three-dimensional cross-linked thermoset structures. Epoxides: ▸ are highly reactive with acids, bases, and oxidising and reducing agents. ▸ react, possibly violently, with anhydrous metal chlorides, ammonia, amines and group 1 metals. Glycidyl ethers: ▸ may form unstable peroxides on storage in air ,light, sunlight, UV light or other ionising radiation, trace metals - inhibitor should be maintained at adequate levels ▸ may polymerise in contact with heat, organic and inorganic free radical producing initiators ▸ may polymerise with evolution of heat in contact with oxidisers, strong acids, bases and amines ▸ react violently with strong oxidisers, permanganates, peroxides, acyl halides, alkalis, ammonium persulfate, bromine dioxide ▸ attack some forms of plastics, coatings, and rubber Reactive diluents are stable under recommended storage conditions, but can decompose at elevated temperatures.In some cases, decomposition can cause pressure build-up in closed systems. ▸ Avoid cross contamination between the two liquid parts of product (kit). ▸ If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur. ▸ Avoid reaction with amines, mercaptans, strong acids and oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Retro-Coat Standard Primer Part B	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
bisphenol A diglycidyl ether polymer	Not Available	Not Available
o-cresyl glycidyl ether	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit

Continued...

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
bisphenol A diglycidyl ether polymer	E	≤ 0.1 ppm
o-cresyl glycidyl ether	E	≤ 0.1 ppm
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
Individual protection measures, such as personal protective equipment	
Eye and face protection	‣ Safety glasses with side shields. ‣ Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	**NOTE:** ‣ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. When handling liquid-grade epoxy resins wear chemically protective gloves , boots and aprons. The performance, based on breakthrough times ,of: · Ethyl Vinyl Alcohol (EVAL laminate) is generally excellent · Butyl Rubber ranges from excellent to good · Nitrile Butyl Rubber (NBR) from excellent to fair. ‣ **DO NOT** use solvent to clean the skin
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Epoxy resins are thermosetting polymers, which are crosslinked using hardeners (curing agents). Epoxy is either any of the basic components or the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resins, also known as polyepoxides, are a class of reactive prepolymers and polymers which contain at least two epoxide groups. Reactive diluents are generally colourless to yellow/ amber, low viscosity liquids with mild ether-like odour; solubility in water varies across the family. Substitution on the phenolic rings may generate solids. Bisphenol A epoxy resin. Important epoxy resins are produced from combining epichlorohydrin and bisphenol A to give bisphenol A diglycidyl ethers. Increasing the ratio of bisphenol A to epichlorohydrin during manufacture produces higher molecular weight linear polyethers with glycidyl end groups, which are semi-solid to hard crystalline materials at room temperature depending on the molecular weight achieved. As the molecular weight of the resin increases, the epoxide content reduces and the material behaves more and more like a thermoplastic. Epoxy resins are thermosetting polymers, which are crosslinked using hardeners (curing agents). Epoxy is either any of the basic components or the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resins, also known as polyepoxides, are a class of reactive prepolymers and polymers which contain at least two epoxide groups. Reactive diluents are generally colourless to yellow/ amber, low viscosity liquids with mild ether-like odour; solubility in water varies across the family. Substitution on the phenolic rings may generate solids. Light sensitive.

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available

Continued...

Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	>93.33	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	<5 g/L when mixed as intended

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. In animal testing, exposure to aerosols of reactive diluents (especially o-cresol glycidyl ether, CAS RN:2210-79-9) has been reported to affect the adrenal gland, central nervous system, kidney, liver, ovaries, spleen, testes, thymus and respiratory tract. Inhalation hazard is increased at higher temperatures. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Reactive diluents exhibit a range of ingestion hazards. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Animal testing showed that a single dose of bisphenol A diglycidyl ether (BADGE) given by mouth, caused an increase in immature sperm.
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Bisphenol A diglycidyl ether (BADGE) may produce contact dermatitis characterized by redness and swelling, with weeping followed by crusting and scaling. A liquid resin with a molecular weight of 350 produced severe skin irritation when applied daily for 4 hours over 20 days. Skin contact with reactive diluents may cause slight to moderate irritation with local redness. Repeated or prolonged skin contact may cause burns. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn). Eye contact with reactive diluents may cause slight to severe irritation with the possibility of chemical burns or moderate to severe damage to the cornea.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Ample evidence exists that this material directly causes reduced fertility Glycidyl ethers can cause genetic damage and cancer. Bisphenol A diglycidyl ethers (BADGEs) produce a sensitization dermatitis (skin inflammation) characterized by eczema with blisters and papules, with considerable itching of the back of the hand. This may persist for 10-14 days after withdrawal from exposure and recur immediately on re-exposure. For some reactive diluents, prolonged or repeated skin contact may result in absorption of potentially harmful amounts or allergic skin reactions. Exposure to some reactive diluents (notably, neopentylglycol diglycidyl ether, CAS RN: 17557-23-2) has caused cancer in some animal testing. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Continued...

Retro-Coat Standard Primer Part B	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
bisphenol A diglycidyl ether polymer	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 6000 mg/kg[2]	Not Available
	Oral (Rat) LD50: >2400 mg/kg[2]	
o-cresyl glycidyl ether	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye (rabbit): non-irritating *
	Inhalation(Rat) LC50: >6.1 ppm4h[1]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[2]	Skin (rabbit): irritating *
		Skin: no adverse effect observed (not irritating)[1]
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

BISPHENOL A DIGLYCIDYL ETHER POLYMER	Bisphenol A diglycidyl ethers (BADGEs) produce a sensitization dermatitis (skin inflammation) characterized by eczema with blisters and papules, with considerable itching of the back of the hand. This may persist for 10-14 days after withdrawal from exposure and recur immediately on re-exposure. The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon. This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics. Bisphenol A (BPA) and some related compounds exhibit oestrogenic activity in human breast cancer cell line MCF-7, but there were remarkable differences in activity. Bisphenol A may have effects similar to female sex hormones and when administered to pregnant women, may damage the foetus. It may also damage male reproductive organs and sperm. Glycidyl ethers can cause genetic damage and cancer. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. * [Reichold]; ** [Epoxylite Corp.]; for monomer
O-CRESYL GLYCIDYL ETHER	o-CGE is a direct-acting mutagen in in-vitro test systems. Studies in vivo, including micronucleus tests and assays in transgenic animals, showed no mutagenic activity. Causes sensitisation * * Huntsman Araldite DY-K/ CH SDS
Retro-Coat Standard Primer Part B & O-CRESYL GLYCIDYL ETHER	Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.
Retro-Coat Standard Primer Part B & BISPHENOL A DIGLYCIDYL ETHER POLYMER & O-CRESYL GLYCIDYL ETHER	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) share many common characteristics with respect to animal toxicology. One such oxirane is ethyloxirane; data presented here may be taken as representative.
Retro-Coat Standard Primer Part B & BISPHENOL A DIGLYCIDYL ETHER POLYMER	Animal testing over 13 weeks showed bisphenol A diglycidyl ether (BADGE) caused mild to moderate, chronic, inflammation of the skin. Reproductive and Developmental Toxicity: Animal testing showed BADGE given over several months caused reduction in body weight but had no reproductive effects.
BISPHENOL A DIGLYCIDYL ETHER POLYMER & O-CRESYL GLYCIDYL ETHER	For 1,2-butylene oxide (ethyloxirane): In animal testing, ethyloxirane increased the incidence of tumours of the airways in animals exposed via inhalation. However, tumours were not observed in mice chronically exposed via skin.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✓	**Reproductivity**	✓
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✓
Mutagenicity	✓	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Retro-Coat Standard Primer Part B	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
bisphenol A diglycidyl ether polymer	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
o-cresyl glycidyl ether	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	EC50(ECx)	24h	Crustacea	1-10mg/l	Not Available

Continued...

	EC50	72h	Algae or other aquatic plants	~5.1mg/l	2
	LC50	96h	Fish	1-10mg/l	Not Available
	EC50	48h	Crustacea	~3.3mg/l	2

Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Liquid epoxy resins and some reactive diluents are not readily biodegradable, although its epoxy functional groups are hydrolysed in contact with water, they have the potential to bio-accumulate and are moderately toxic to aquatic organisms. They are generally classified as dangerous for the environment according to the European Union classification criteria.
Reactive diluents generally have a low to moderate potential for bioconcentration (tendency to accumulate in the food chain) and a high to very high potential for mobility in soil. Small amounts that escape to the atmosphere will photodegrade.
Environmental toxicity is a function of the n-octanol/water partition coefficient (log Pow, log Kow). Compounds with log Pow >5 act as neutral organics, but at a lower log Pow, the toxicity of epoxide-containing polymers is greater than that predicted for simple narcotics.
Significant environmental findings are limited. Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) exhibit common characteristics with respect to environmental fate and ecotoxicology.
For 1,2-Butylene oxide (Ethyloxirane):
log Kow values of 0.68 and 0.86. BAF and BCF : 1 to 17 L./kg.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
bisphenol A diglycidyl ether polymer	HIGH	HIGH
o-cresyl glycidyl ether	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
bisphenol A diglycidyl ether polymer	LOW (LogKOW = 2.6835)
o-cresyl glycidyl ether	LOW (LogKOW = 2.1609)

Mobility in soil

Ingredient	Mobility
bisphenol A diglycidyl ether polymer	LOW (KOC = 51.43)
o-cresyl glycidyl ether	LOW (KOC = 67.93)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Waste Management Production waste from epoxy resins and resin systems should be treated as hazardous waste in accordance with National regulations. Fire retarded resins containing halogenated compounds should also be treated as special waste. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Management Authority for disposal.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Excepted Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate

Continued...

labels and markings in accordance with applicable transport regulations.

Land transport (DOT)

UN number or ID number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)
Transport hazard class(es)	Class: 9 Subsidiary risk: Not Applicable
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Hazard Label: 9 Special provisions: 8, 146, 173, 335, 441, IB3, T4, TP1, TP29

For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain LESS THAN the reportable quantity (5 kg or 5 L) - Not Regulated
For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain MORE THAN the reportable quantity (5 kg or 5 L) - Regulated and classified as below:

Air transport (ICAO-IATA / DGR)

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)
Transport hazard class(es)	ICAO/IATA Class: 9 ICAO / IATA Subrisk: Not Applicable ERG Code: 9L
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions: A97 A158 A197 A215 Cargo Only Packing Instructions: 964 Cargo Only Maximum Qty / Pack: 450 L Passenger and Cargo Packing Instructions: 964 Passenger and Cargo Maximum Qty / Pack: 450 L Passenger and Cargo Limited Quantity Packing Instructions: Y964 Passenger and Cargo Limited Maximum Qty / Pack: 30 kg G

Sea transport (IMDG-Code / GGVSee)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A diglycidyl ether polymer)
Transport hazard class(es)	IMDG Class: 9 IMDG Subrisk: Not Applicable
Packing group	III
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number: F-A, S-F Special provisions: 274 335 969 Limited Quantities: 5 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
bisphenol A diglycidyl ether polymer	Not Available
o-cresyl glycidyl ether	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
bisphenol A diglycidyl ether polymer	Not Available
o-cresyl glycidyl ether	Not Available

Continued...

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

bisphenol A diglycidyl ether polymer is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

o-cresyl glycidyl ether is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	Yes
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	Yes
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65

None listed

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (bisphenol A diglycidyl ether polymer; o-cresyl glycidyl ether)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (bisphenol A diglycidyl ether polymer)
Japan - ENCS	No (bisphenol A diglycidyl ether polymer)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (o-cresyl glycidyl ether)
Vietnam - NCI	Yes
Russia - FBEPH	No (o-cresyl glycidyl ether)
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

Continued...

SECTION 16 Other information

Revision Date	04/17/2023
Initial Date	11/06/2020

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
1.2	04/17/2023	Composition / information on ingredients - Ingredients

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index
AIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Powered by AuthorITe, from Chemwatch.

end of SDS

Retro-Coat Clear Part A

Land Science, a division of REGENESIS

Version No: **5.5**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **04/24/2023**
Print Date: **04/24/2023**
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Retro-Coat Clear Part A
Synonyms	Not Available
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(contains Liquid Epoxy Resin)
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Specialty flooring resin

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Land Science, a division of REGENESIS**
Address	1011 Calle Sombra San Clemente CA 92673 United States
Telephone	949-481-8118
Fax	949-366-8090
Website	landsciencetech.com
Email	CustomerService@LandScienceTech.com

Emergency phone number

Association / Organisation	**CHEMTREC 24/7**
Emergency telephone numbers	1-800-424-9300 (USA and Canada)
Other emergency telephone numbers	1-703-527-3887 (International

SECTION 2 Hazard(s) identification

Classification of the substance or mixture



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Serious Eye Damage/Eye Irritation Category 2A, Reproductive Toxicity Category 1A, Hazardous to the Aquatic Environment Long-Term Hazard Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Germ Cell Mutagenicity Category 2

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

H319	Causes serious eye irritation.

Page 1 continued...

H360	May damage fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H373	May cause damage to organs through prolonged or repeated exposure.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash all exposed external body areas thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s) Storage

P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
9003-36-5	65-85	phenol/ formaldehyde glycidyl ether copolymer
28064-14-4	5-10	bisphenol F diglycidyl ether copolymer
2210-79-9	5-10	o-cresyl glycidyl ether

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.

Continued...

Ingestion	▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▸ Seek medical advice.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: carbon dioxide (CO_2) aldehydes other pyrolysis products typical of burning organic material.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	▸ In the event of a spill of a reactive diluent, the focus is on containing the spill to prevent contamination of soil and surface or ground water. ▸ If irritating vapors are present, an approved air-purifying respirator with organic vapor canister is recommended for cleaning up spills and leaks. ▸ For small spills, reactive diluents should be absorbed with sand. Environmental hazard - contain spillage. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment.
Major Spills	Environmental hazard - contain spillage. Industrial spills or releases of reactive diluents are infrequent and generally contained. If a large spill does occur, the material should be captured, collected, and reprocessed or disposed of according to applicable governmental requirements. An approved air-purifying respirator with organic-vapor canister is recommended for emergency work. Moderate hazard. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin

Continued...

Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Epoxides: ▸ are highly reactive with acids, bases, and oxidising and reducing agents. ▸ react, possibly violently, with anhydrous metal chlorides, ammonia, amines and group 1 metals. ▸ may polymerise in the presence of peroxides or heat - polymerisation may be violent ▸ may react, possibly violently, with water in the presence of acids and other catalysts. ▸ Phenols are incompatible with strong reducing substances such as hydrides, nitrides, alkali metals, and sulfides. ▸ Avoid use of aluminium, copper and brass alloys in storage and process equipment. ▸ Heat is generated by the acid-base reaction between phenols and bases. Glycidyl ethers: ▸ may form unstable peroxides on storage in air ,light, sunlight, UV light or other ionising radiation, trace metals - inhibitor should be maintained at adequate levels ▸ may polymerise in contact with heat, organic and inorganic free radical producing initiators ▸ may polymerise with evolution of heat in contact with oxidisers, strong acids, bases and amines ▸ react violently with strong oxidisers, permanganates, peroxides, acyl halides, alkalis, ammonium persulfate, bromine dioxide ▸ attack some forms of plastics, coatings, and rubber Reactive diluents are stable under recommended storage conditions, but can decompose at elevated temperatures.In some cases, decomposition can cause pressure build-up in closed systems. ▸ Avoid cross contamination between the two liquid parts of product (kit). ▸ If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur. ▸ This excess heat may generate toxic vapour ▸ Avoid reaction with amines, mercaptans, strong acids and oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
bisphenol F diglycidyl ether copolymer	30 mg/m3	330 mg/m3	2,000 mg/m3

Ingredient	Original IDLH	Revised IDLH
phenol/ formaldehyde glycidyl ether copolymer	Not Available	Not Available
bisphenol F diglycidyl ether copolymer	Not Available	Not Available
o-cresyl glycidyl ether	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
phenol/ formaldehyde glycidyl ether copolymer	E	≤ 0.1 ppm
bisphenol F diglycidyl ether copolymer	E	≤ 0.1 ppm
o-cresyl glycidyl ether	E	≤ 0.1 ppm
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.
Individual protection measures, such as personal protective equipment	

Continued...

Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	**NOTE:** ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. When handling liquid-grade epoxy resins wear chemically protective gloves , boots and aprons. The performance, based on breakthrough times ,of: · Ethyl Vinyl Alcohol (EVAL laminate) is generally excellent · Butyl Rubber ranges from excellent to good · Nitrile Butyl Rubber (NBR) from excellent to fair. · Neoprene from excellent to fair · Polyvinyl (PVC) from excellent to poor As defined in ASTM F-739-96 · Excellent breakthrough time > 480 min · Good breakthrough time > 20 min · Fair breakthrough time < 20 min · Poor glove material degradation Gloves should be tested against each resin system prior to making a selection of the most suitable type. ▸ Neoprene gloves
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ P.V.C apron. ▸ Barrier cream.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Phenolic resins are also widely known as phenol–formaldehyde resins, PF resins and phenoplasts. The trade name Bakelite has in the past been widely and erroneously used as a common noun and indeed is noted as such in many English dictionaries. Reaction of phenol with less than equimolar proportions of formaldehyde under acidic conditions gives novolac resins containing aromatic phenol units linked predominantly by methylene bridges. Novolac resins are thermally stable and can be cured by cross-linking with formaldehyde donors such as hexamethylenetetramine. However, resoles are the most widely used phenolic resins for composites: they are manufactured by reacting phenol with a greater than equimolar amount of formaldehyde under alkaline conditions and are essentially hydroxymethyl functional phenols or polynuclear. Reaction of phenols with formaldehyde and subsequent glycidylation with epichlorohydrin produces epoxidised novolacs, such as epoxy phenol novolacs (EPN) and epoxy cresol novolacs (ECN). These are highly viscous to solid resins with typical mean epoxide functionality of around 2 to 6. The high epoxide functionality of these resins forms a highly crosslinked polymer network displaying high temperature and chemical resistance, but low flexibility. Epoxy Novolac Resins are specifically designed to provide increased levels of thermal stability and chemical resistance. Reactive diluents are generally colourless to yellow/ amber, low viscosity liquids with mild ether-like odour; solubility in water varies across the family. Substitution on the phenolic rings may generate solids. Reactive diluents may contain trace residuals of epichlorohydrin a known skin irritant. Family of products which vary in their physical properties as a result of variations in production. Data presented here is for typical family member.

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	>93.33	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available

Continued...

Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	<5 g/l when mixed as intended

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. In animal testing, exposure to aerosols of reactive diluents (especially o-cresol glycidyl ether, CAS RN:2210-79-9) has been reported to affect the adrenal gland, central nervous system, kidney, liver, ovaries, spleen, testes, thymus and respiratory tract.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Reactive diluents exhibit a range of ingestion hazards. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. However, swallowing larger amounts may cause injury. At sufficiently high doses the material may be hepatotoxic (i.e. poisonous to the liver). At sufficiently high doses the material may be nephrotoxic (i.e. poisonous to the kidney). High molecular weight material; on single acute exposure would be expected to pass through gastrointestinal tract with little change / absorption. Occasionally accumulation of the solid material within the alimentary tract may result in formation of a bezoar (concretion), producing discomfort.
Skin Contact	The material may accentuate any pre-existing dermatitis condition Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Skin contact with reactive diluents may cause slight to moderate irritation with local redness. Repeated or prolonged skin contact may cause burns. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.
Eye	Eye contact with reactive diluents may cause slight to severe irritation with the possibility of chemical burns or moderate to severe damage to the cornea. This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Ample evidence exists that this material directly causes reduced fertility This product contains a polymer with reactive functional groups (aldehydes and phenolics) regarded as being of moderate concern. Aldehydes are reactive, soluble and are highly irritating. Glycidyl ethers can cause genetic damage and cancer. For some reactive diluents, prolonged or repeated skin contact may result in absorption of potentially harmful amounts or allergic skin reactions. Exposure to some reactive diluents (notably, neopentylglycol diglycidyl ether, CAS RN: 17557-23-2) has caused cancer in some animal testing. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Bisphenol F, bisphenol A, fluorine-containing bisphenol A (bisphenol AF) and other diphenylalkanes were found to have oestrogen-like effects. Bisphenol F is present in the environment and as a contaminant of food, so humans may therefore be exposed to bisphenol. Testing shows bisphenol F has genetic toxicity as well as the ability to disrupt hormonal balance. Bisphenol A may have effects similar to female sex hormones and when administered to pregnant women, may damage the foetus. It may also damage male reproductive organs and sperm.

Retro-Coat Clear Part A	**TOXICITY**	**IRRITATION**

Continued...

	Not Available	Not Available

phenol/ formaldehyde glycidyl ether copolymer	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >400 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: >5000 mg/kg[2]	Skin: adverse effect observed (irritating)[1]

bisphenol F diglycidyl ether copolymer	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: 4000 mg/kg[2]	Eyes * (-) (-) Slight irritant Effects transient * [Ciba-Geigy]
	Oral (Rat) LD50: 4000 mg/kg[2]	Skin * (-) (-) Slight irritant May cause allergic response

o-cresyl glycidyl ether	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye (rabbit): non-irritating *
	Inhalation(Rat) LC50: >6.1 ppm4h[1]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[2]	Skin (rabbit): irritating *
		Skin: no adverse effect observed (not irritating)[1]

Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

Retro-Coat Clear Part A	The various members of the bisphenol family produce hormone like effects, seemingly as a result of binding to estrogen receptor-related receptors (ERRs; not to be confused with estrogen receptors) A suspected estrogen-related receptors (ERR) binding agent: Estrogen-related receptors (ERR, oestrogen-related receptors) are so named because of sequence homology with estrogen receptors but do not appear to bind estrogens or other tested steroid hormones. The ERR family have been demonstrated to control energy homeostasis, oxidative metabolism and mitochondrial biogenesis ,while effecting mammalian physiology in the heart, brown adipose tissue, white adipose tissue, placenta, macrophages, and demonstrated additional roles in diabetes and cancer. ERRs bind enhancers throughout the genome where they exert effects on gene regulation Although their overall functions remain uncertain, they also share DNA-binding sites, co-regulators, and target genes with the conventional estrogen receptors ERalpha and ERbeta and may function to modulate estrogen signaling pathways. · ERR-alpha has wide tissue distribution but it is most highly expressed in tissues that preferentially use fatty acids as energy sources such as kidney, heart, brown adipose tissue, cerebellum, intestine, and skeletal muscle. ERRalpha has been detected in normal adrenal cortex tissues, in which its expression is possibly related to adrenal development, with a possible role in fetal adrenal function, in dehydroepiandrosterone (DHEAS) production in adrenarche, and also in steroid production of post-adrenarche/adult life. DHEA and other adrenal androgens such as androstenedione, although relatively weak androgens, are responsible for the androgenic effects of adrenarche, such as early pubic and axillary hair growth, adult-type body odor, increased oiliness of hair and skin, and mild acne.
PHENOL/ FORMALDEHYDE GLYCIDYL ETHER COPOLYMER	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
O-CRESYL GLYCIDYL ETHER	o-CGE is a direct-acting mutagen in in-vitro test systems. Studies in vivo, including micronucleus tests and assays in transgenic animals, showed no mutagenic activity. Causes sensitisation * * Huntsman Araldite DY-K/ CH SDS For 1,2-butylene oxide (ethyloxirane): In animal testing, ethyloxirane increased the incidence of tumours of the airways in animals exposed via inhalation. However, tumours were not observed in mice chronically exposed via skin. Two structurally related substances, oxirane (ethylene oxide) and methyloxirane (propylene oxide), which are also direct-acting alkylating agents, have been classified as causing cancer.
Retro-Coat Clear Part A & O-CRESYL GLYCIDYL ETHER	Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.
Retro-Coat Clear Part A & PHENOL/ FORMALDEHYDE GLYCIDYL ETHER COPOLYMER & BISPHENOL F DIGLYCIDYL ETHER COPOLYMER & O-CRESYL GLYCIDYL ETHER	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.
Retro-Coat Clear Part A & PHENOL/ FORMALDEHYDE GLYCIDYL ETHER COPOLYMER & BISPHENOL F DIGLYCIDYL ETHER COPOLYMER	The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon. This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics. Bisphenol A (BPA) and some related compounds exhibit oestrogenic activity in human breast cancer cell line MCF-7, but there were remarkable differences in activity. Several derivatives of BPA exhibited significant thyroid hormonal activity towards rat pituitary cell line GH3, which releases growth hormone in a thyroid hormone-dependent manner.
Retro-Coat Clear Part A & BISPHENOL F DIGLYCIDYL ETHER COPOLYMER & O-CRESYL GLYCIDYL ETHER	Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) share many common characteristics with respect to animal toxicology. One such oxirane is ethyloxirane; data presented here may be taken as representative.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✓	**Reproductivity**	✓
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✓
Mutagenicity	✓	**Aspiration Hazard**	✗

Continued...

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Retro-Coat Clear Part A

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

phenol/ formaldehyde glycidyl ether copolymer

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

bisphenol F diglycidyl ether copolymer

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

o-cresyl glycidyl ether

Endpoint	Test Duration (hr)	Species	Value	Source
EC50(ECx)	24h	Crustacea	1-10mg/l	Not Available
EC50	72h	Algae or other aquatic plants	~5.1mg/l	2
LC50	96h	Fish	1-10mg/l	Not Available
EC50	48h	Crustacea	~3.3mg/l	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
For high molecular weight synthetic polymers: (according to the Sustainable Futures (SF) program (U.S. EPA 2005b; U.S. EPA 2012c) polymer assessment guidance.)
High MW polymers are expected:
· to have low vapour pressure and are not expected to undergo volatilization .
· to adsorb strongly to soil and sediment
· to be non-biodegradable (not anticipated to be assimilated by microorganisms.- therefore, biodegradation is not expected to be an important removal process. However many exceptions exist
High MW polymers are not expected to undergo removal by other degradative processes under environmental conditions
For bisphenol A and related bisphenols:
Environmental fate:
Biodegradability (28 d) 89% - Easily biodegradable
Bioconcentration factor (BCF) 7.8 mg/l
Bisphenol A, its derivatives and analogues, can be released from polymers, resins and certain substances by metabolic products
Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII
As an environmental contaminant, bisphenol A interferes with nitrogen fixation at the roots of leguminous plants associated with the bacterial symbiont Sinorhizobium meliloti. Despite a half-life in the soil of only 1-10 days, its ubiquity makes it an important pollutant. According to Environment Canada, 'initial assessment shows that at low levels, bisphenol A can harm fish and organisms over time.
Reactive diluents generally have a low to moderate potential for bioconcentration (tendency to accumulate in the food chain) and a high to very high potential for mobility in soil. Small amounts that escape to the atmosphere will photodegrade.
They would not be expected to persist in the environment.
Environmental toxicity is a function of the n-octanol/water partition coefficient (log Pow, log Kow). Compounds with log Pow >5 act as neutral organics, but at a lower log Pow, the toxicity of epoxide-containing polymers is greater than that predicted for simple narcotics.
Significant environmental findings are limited. Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) exhibit common characteristics with respect to environmental fate and ecotoxicology. One such oxirane is ethyloxirane and data presented here may be taken as representative.
For 1,2-Butylene oxide (Ethyloxirane):
log Kow values of 0.68 and 0.86. BAF and BCF : 1 to 17 L./kg.
Aquatic Fate - Ethyloxirane is highly soluble in water and has a very low soil-adsorption coefficient, which suggests that, if released to water, adsorption of ethyloxirane to sediment and suspended solids is not expected.
For Phenols:
Ecotoxicity - Phenols with log Pow >7.4 are expected to exhibit low toxicity to aquatic organisms however; the toxicity of phenols with a lower log Pow is variable. Dinitrophenols are more toxic than predicted from QSAR estimates. Hazard information for these groups is not generally available.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
o-cresyl glycidyl ether	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
o-cresyl glycidyl ether	LOW (LogKOW = 2.1609)

Mobility in soil

Ingredient	Mobility
o-cresyl glycidyl ether	LOW (KOC = 67.93)

Continued...

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Authority for disposal. ▸ Bury or incinerate residue at an approved site.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Excepted Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

Land transport (DOT)

UN number or ID number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(contains Liquid Epoxy Resin)
Transport hazard class(es)	Class: 9 Subsidiary risk: Not Applicable
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Hazard Label: 9 Special provisions: 8, 146, 173, 335, 441, IB3, T4, TP1, TP29

For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain LESS THAN the reportable quantity (5 kg or 5 L) - Not Regulated
For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain MORE THAN the reportable quantity (5 kg or 5 L) - Regulated and classified as below:

Air transport (ICAO-IATA / DGR)

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(contains Liquid Epoxy Resin)
Transport hazard class(es)	ICAO/IATA Class: 9 ICAO / IATA Subrisk: Not Applicable ERG Code: 9L
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions: A97 A158 A197 A215 Cargo Only Packing Instructions: 964 Cargo Only Maximum Qty / Pack: 450 L Passenger and Cargo Packing Instructions: 964 Passenger and Cargo Maximum Qty / Pack: 450 L Passenger and Cargo Limited Quantity Packing Instructions: Y964 Passenger and Cargo Limited Maximum Qty / Pack: 30 kg G

Continued...

Sea transport (IMDG-Code / GGVSee)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains Liquid Epoxy Resin)
Transport hazard class(es)	IMDG Class: 9 IMDG Subrisk: Not Applicable
Packing group	III
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number: F-A, S-F Special provisions: 274 335 969 Limited Quantities: 5 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
phenol/ formaldehyde glycidyl ether copolymer	Not Available
bisphenol F diglycidyl ether copolymer	Not Available
o-cresyl glycidyl ether	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
phenol/ formaldehyde glycidyl ether copolymer	Not Available
bisphenol F diglycidyl ether copolymer	Not Available
o-cresyl glycidyl ether	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

phenol/ formaldehyde glycidyl ether copolymer is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

bisphenol F diglycidyl ether copolymer is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US DOE Temporary Emergency Exposure Limits (TEELs)

o-cresyl glycidyl ether is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	Yes
Skin Corrosion or Irritation	Yes

Continued...

Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	Yes
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65

None listed

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (phenol/ formaldehyde glycidyl ether copolymer; bisphenol F diglycidyl ether copolymer; o-cresyl glycidyl ether)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (bisphenol F diglycidyl ether copolymer)
Japan - ENCS	No (phenol/ formaldehyde glycidyl ether copolymer)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (bisphenol F diglycidyl ether copolymer; o-cresyl glycidyl ether)
Vietnam - NCI	Yes
Russia - FBEPH	No (o-cresyl glycidyl ether)
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

SECTION 16 Other information

Revision Date	04/24/2023
Initial Date	03/02/2021

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
4.5	04/24/2023	Composition / information on ingredients - Ingredients

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

Powered by AuthorITe, from Chemwatch.

Retro-Coat Clear Part B

Land Science, a division of REGENESIS

Version No: **2.2**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **04/18/2023**
Print Date: **04/25/2023**
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Retro-Coat Clear Part B
Synonyms	Not Available
Proper shipping name	Amines, liquid, corrosive, n.o.s. (contains isophorone diamine)
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Specialty flooring curative

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Land Science, a division of REGENESIS**
Address	1011 Calle Sombra San Clemente CA 92673 United States
Telephone	949-481-8118
Fax	949-366-8090
Website	landsciencetech.com
Email	CustomerService@LandScienceTech.com

Emergency phone number

Association / Organisation	**CHEMTREC 24/7**
Emergency telephone numbers	**1-800-424-9300 (USA and Canada)**
Other emergency telephone numbers	**1-703-527-3887 (International**

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2, Acute Toxicity (Dermal) Category 4, Specific Target Organ Toxicity - Repeated Exposure Category 2, Corrosive to Metals Category 1, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 4, Acute Toxicity (Oral) Category 4, Sensitisation (Skin) Category 1A, Reproductive Toxicity Category 2, Germ Cell Mutagenicity Category 2, Skin Corrosion/Irritation Category 1A, Carcinogenicity Category 2

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Page 1 continued...

Hazard statement(s)

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H312	Harmful in contact with skin.
H373	May cause damage to organs through prolonged or repeated exposure.
H290	May be corrosive to metals.
H332	Harmful if inhaled.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.
H341	Suspected of causing genetic defects.
H314	Causes severe skin burns and eye damage.
H351	Suspected of causing cancer.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P234	Keep only in original container.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing must not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.
P363	Wash contaminated clothing before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement(s) Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P406	Store in corrosive resistant/ container with a resistant inner liner.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name

Continued...

CAS No	%[weight]	Name
100-51-6	30-60	benzyl alcohol
69-72-7	0.5-1.5	salicylic acid
135108-88-2	10-30	formaldehyde/ benzenamine, hydrogenated
1761-71-3	5-10	4,4'-methylenebis(cyclohexylamine)
2579-20-6	5-10	1,3-cyclohexanebis(methylamine)
128-37-0	0.5-1.5	2,6-di-tert-butyl-4-methylphenol
1477-55-0	5-10	m-xylenediamine
2855-13-2	10-30	isophorone diamine
98-54-4	1-5	p-tert-butylphenol

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Immediately hold eyelids apart and flush the eye continuously with running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▸ Transport to hospital or doctor without delay. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. For amines: ▸ If liquid amines come in contact with the eyes, irrigate immediately and continuously with low pressure flowing water, preferably from an eye wash fountain, for 15 to 30 minutes. ▸ For more effective flushing of the eyes, use the fingers to spread apart and hold open the eyelids. The eyes should then be “rolled” or moved in all directions. ▸ Seek immediate medical attention, preferably from an ophthalmologist.
Skin Contact	If skin or hair contact occurs: ▸ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▸ Quickly remove all contaminated clothing, including footwear. ▸ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▸ Transport to hospital, or doctor. For amines: ▸ In case of major exposure to liquid amine, promptly remove any contaminated clothing, including rings, watches, and shoe, preferably under a safety shower. ▸ Wash skin for 15 to 30 minutes with plenty of water and soap. Call a physician immediately. ▸ Remove and dry-clean or launder clothing soaked or soiled with this material before reuse. Dry cleaning of contaminated clothing may be more effective than normal laundering. ▸ Inform individuals responsible for cleaning of potential hazards associated with handling contaminated clothing. ▸ Discard contaminated leather articles such as shoes, belts, and watchbands. ▸ Note to Physician: Treat any skin burns as thermal burns. After decontamination, consider the use of cold packs and topical antibiotics.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor, without delay. ▸ Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. ▸ Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). ▸ As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. ▸ Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. **This must definitely be left to a doctor or person authorised by him/her.** (ICSC13719) For amines: ▸ All employees working in areas where contact with amine catalysts is possible should be thoroughly trained in the administration of appropriate first aid procedures. ▸ Experience has demonstrated that prompt administration of such aid can minimize the effects of accidental exposure. ▸ Promptly move the affected person away from the contaminated area to an area of fresh air. ▸ Keep the affected person calm and warm, but not hot. ▸ If breathing is difficult, oxygen may be administered by a qualified person. ▸ If breathing stops, give artificial respiration. Call a physician at once.
Ingestion	▸ For advice, contact a Poisons Information Centre or a doctor at once. ▸ Urgent hospital treatment is likely to be needed. ▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▸ Transport to hospital or doctor without delay. For amines: ▸ If liquid amine are ingested, have the affected person drink several glasses of water or milk. ▸ Do not induce vomiting. ▸ Immediately transport to a medical facility and inform medical personnel about the nature of the exposure. The decision of whether to induce

Continued...

	vomiting should be made by an attending physician.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

for salicylate intoxication:
· Pending gastric lavage, use emetics such as syrup of Ipecac or delay gastric emptying and absorption by swallowing a slurry of activated charcoal. Do not give ipecac after charcoal.
· Gastric lavage with water or perhaps sodium bicarbonate solution (3%-5%). Mild alkali delays salicylate absorption from the stomach and perhaps slightly from the duodenum.
· Saline catharsis with sodium or magnesium sulfate (15-30 gm in water).
· Take an immediate blood sample for an appraisal of the patient's acid-base status. A pH determination on an anaerobic sample of arterial blood is best. An analysis of the plasma salicylate concentration should be made at the same time. Laboratory controls are almost essential for the proper management of severe salicylism.
· In the presence of an established acidosis, alkali therapy is essential, but at least in an adult, alkali should be withheld until its need is demonstrated by chemical analysis. The intensity of treatment depends on the intensity of acidosis. In the presence of vomiting, intravenous sodium bicarbonate is the most satisfactory of all alkali therapy.
· Correct dehydration and hypoglycaemia (if present) by the intravenous administration of glucose in water or in isotonic saline. The administration of glucose may also serve to remedy ketosis which is often seen in poisoned children.
· Even in patients without hypoglycaemia, infusions of glucose adequate to produce distinct hyperglycaemia are recommended to prevent glucose depletion in the brain. This recommendation is based on impressive experimental data in animals.
· Renal function should be supported by correcting dehydration and incipient shock. Overhydration is not justified. An alkaline urine should be maintained by the administration of alkali if necessary with care to prevent a severe systemic alkalosis. As long as urine remains alkaline (pH above 7.5), administration of an osmotic diuretic such as mannitol or perhaps THAM is useful, but one must be careful to avoid hypokalaemia. Supplements of potassium chloride should be included in parenteral fluids.
· Small doses of barbiturates, diazepam, paraldehyde, or perhaps other sedatives (but probably not morphine) may be required to suppress extreme restlessness and convulsions.
· For hyperpyrexia, use sponge baths.
The presence of petechiae or other signs of haemorrhagic tendency calls for a large Vitamin K dose and perhaps ascorbic acid. Minor transfusions may be necessary since bleeding in salicylism is not always due to a prothrombin effect.
· Haemodialysis and haemoperfusion have proved useful in salicylate poisoning, as have peritoneal dialysis and exchange transfusions, but alkaline diuretic therapy is probably sufficient except in fulminating cases.
[*GOSSELIN, et.al.: Clinical Toxicology of Commercial Products*]
The mechanism of the toxic effect involves metabolic acidosis, respiratory alkalosis, hypoglycaemia, and potassium depletion. Salicylate poisoning is characterised by extreme acid-base disturbances, electrolyte disturbances and decreased levels of consciousness. There are differences between acute and chronic toxicity and a varying clinical picture which is dependent on the age of the patient and their kidney function. The major feature of poisoning is metabolic acidosis due to "uncoupling of oxidative phosphorylation" which produces an increased metabolic rate, increased oxygen consumption, increased formation of carbon dioxide, increased heat production and increased utilisation of glucose. Direct stimulation of the respiratory centre leads to hyperventilation and respiratory alkalosis. This leads to compensatory increased renal excretion of bicarbonate which contributes to the metabolic acidosis which may coexist or develop subsequently. Hypoglycaemia may occur as a result of increased glucose demand, increased rates of tissue glycolysis, and impaired rate of glucose synthesis. **NOTE:** Tissue glucose levels may be lower than plasma levels. Hyperglycaemia may occur due to increased glycogenolysis. Potassium depletion occurs as a result of increased renal excretion as well as intracellular movement of potassium.
Salicylates competitively inhibit vitamin K dependent synthesis of factors II, VII, IX, X and in addition, may produce a mild dose dependent hepatitis. Salicylates are bound to albumin. The extent of protein binding is concentration dependent (and falls with higher blood levels). This, and the effects of acidosis, decreasing ionisation, means that the volume of distribution increases markedly in overdose as does CNS penetration. The extent of protein binding (50-80%) and the rate of metabolism are concentration dependent. Hepatic clearance has zero order kinetics and thus the therapeutic half-life of 2-4.5 hours but the half-life in overdose is 18-36 hours. Renal excretion is the most important route in overdose. Thus when the salicylate concentrations are in the toxic range there is increased tissue distribution and impaired clearance of the drug.
HyperTox 3.0 http://www.ozemail.com.au/-ouad/SALI0001.HTA
Clinical experience of benzyl alcohol poisoning is generally confined to premature neonates in receipt of preserved intravenous salines.
- Metabolic acidosis, bradycardia, skin breakdown, hypotonia, hepatorenal failure, hypotension and cardiovascular collapse are characteristic.
- High urine benzoate and hippuric acid as well as elevated serum benzoic acid levels are found.
- The so-called "gasping syndrome describes the progressive neurological deterioration of poisoned neonates.
- Management is essentially supportive.

for non-steroidal anti-inflammatories (NSAIDs)
- Symptoms following acute NSAIDs overdoses are usually limited to lethargy, drowsiness, nausea, vomiting, and epigastric pain, which are generally reversible with supportive care. Gastrointestinal bleeding can occur. Hypertension, acute renal failure, respiratory depression, and coma may occur, but are rare. Anaphylactoid reactions have been reported with therapeutic ingestion of NSAIDs, and may occur following an overdose.
- Patients should be managed by symptomatic and supportive care following a NSAIDs overdose.
- There are no specific antidotes.
- Emesis and/or activated charcoal (60 to 100 grams in adults, 1 to 2 g/kg in children), and/or osmotic cathartic may be indicated in patients seen within 4 hours of ingestion with symptoms or following a large overdose (5 to 10 times the usual dose).
- Forced diuresis, alkalinisation of urine, hemodialysis, or haemoperfusion may not be useful due to high protein binding.
- For gastrointestinal haemorrhage, monitor stool guaiac and administer antacids or sucralfate.
- For mild/moderate allergic reactions, administer antihistamines with or without inhaled beta agonists,corticosteroids, or epinephrine.
- For severe allergic reactions, administer oxygen, antihistamines,epinephrine, or corticosteroids. Nephritis or nephrotic syndrome, thrombocytopenia, or haemolytic anemia may respond to glucocorticoid administration.
- For severe acidosis, administer sodium bicarbonate.
- Administer as required: plasma volume expanders for severe hypotension; diazepam or other benzodiazepine for convulsions; vitamin K1 for hypoprothrombinaemia; and/or dopamine plus dobutamine intravenously to prevent or reverse early indications of renal failure.

Serious gastrointestinal toxicity, such as bleeding, ulceration, and perforation, can occur at any time, with or without warning symptoms, in patients treated chronically with NSAID therapy. Although minor upper gastrointestinal problems, such as dyspepsia, are common, usually developing early in therapy, physicians should remain alert for ulceration and bleeding in patients treated chronically with NSAIDs even in the absence of previous GI tract symptoms. In patients observed in clinical trials of several months to two years duration, symptomatic upper GI ulcers, gross bleeding or perforation appear to occur in approximately 1% of patients treated for 3 to 6 months, and in about 2% to 4% of patients treated for one year. Physicians should inform patients about the signs and/or symptoms of serious GI toxicity and what steps to take if they occur.
Studies to date have not identified any subset of patients not at risk of developing peptic ulceration and bleeding. Except for a prior history of serious GI events and other risk factors known to be associated with peptic ulcer disease, such as alcoholism, smoking, etc., no risk factors (e.g., age, sex) have been associated with increased risk. Elderly or debilitated patients seem to tolerate ulceration or bleeding less well than other individuals, and most spontaneous reports of fatal GI events are in this population. Studies to date are inconclusive concerning the relative risk of various NSAIDs in causing such reactions. High doses of any NSAID probably carry a greater risk of these reactions, although controlled clinical trials showing this do not exist in most cases. In considering the use of relatively large doses (within the recommended dosage range), sufficient benefit should be anticipated to offset the potential increased risk of GI toxicity.
For acute or short-term repeated exposures to highly alkaline materials:
- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.
INGESTION:
- Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.
- Neutralising agents should never be given since exothermic heat reaction may compound injury.

* Catharsis and emesis are absolutely contra-indicated.
* Activated charcoal does not absorb alkali.

Continued...

* Gastric lavage should not be used.
Supportive care involves the following:
- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:
- Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]
For amines:
- Certain amines may cause injury to the respiratory tract and lungs if aspirated. Also, such products may cause tissue destruction leading to stricture. If lavage is performed, endotracheal and/or esophagoscopic control is suggested.
- No specific antidote is known.
- Care should be supportive and treatment based on the judgment of the physician in response to the reaction of the patient.

Laboratory animal studies have shown that a few amines are suspected of causing depletion of certain white blood cells and their precursors in lymphoid tissue. These effects may be due to an immunosuppressive mechanism.
Some persons with hyperreactive airways (e.g., asthmatic persons) may experience wheezing attacks (bronchospasm) when exposed to airway irritants.
Lung injury may result following a single massive overexposure to high vapour concentrations or multiple exposures to lower concentrations of any pulmonary irritant material.
Health effects of amines, such as skin irritation and transient corneal edema (“blue haze,” “halo effect,” “glaucopsia”), are best prevented by means of formal worker education, industrial hygiene monitoring, and exposure control methods. Persons who are highly sensitive to the triggering effect of non-specific irritants should not be assigned to jobs in which such agents are used, handled, or manufactured.
Medical surveillance programs should consist of a pre-placement evaluation to determine if workers or applicants have any impairments (e.g., hyperreactive airways or bronchial asthma) that would limit their fitness for work in jobs with potential for exposure to amines. A clinical baseline can be established at the time of this evaluation.
Periodic medical evaluations can have significant value in the early detection of disease and in providing an opportunity for health counseling.
Medical personnel conducting medical surveillance of individuals potentially exposed to polyurethane amine catalysts should consider the following:
- Health history, with emphasis on the respiratory system and history of infections
- Physical examination, with emphasis on the respiratory system and the lymphoreticular organs (lymph nodes, spleen, etc.)
- Lung function tests, pre- and post-bronchodilator if indicated
- Total and differential white blood cell count
- Serum protein electrophoresis

Persons who are concurrently exposed to isocyanates also should be kept under medical surveillance.
Pre-existing medical conditions generally aggravated by exposure include skin disorders and allergies, chronic respiratory disease (e.g. bronchitis, asthma, emphysema), liver disorders, kidney disease, and eye disease.
Broadly speaking, exposure to amines, as characterised by amine catalysts, may cause effects similar to those caused by exposure to ammonia. As such, amines should be considered potentially injurious to any tissue that is directly contacted.
Inhalation of aerosol mists or vapors, especially of heated product, can result in chemical pneumonitis, pulmonary edema, laryngeal edema, and delayed scarring of the airway or other affected organs. There is no specific treatment.
Clinical management is based upon supportive treatment, similar to that for thermal burns.
Persons with major skin contact should be maintained under medical observation for at least 24 hours due to the possibility of delayed reactions.
Polyurethene Amine Catalysts: Guidelines for Safe Handling and Disposal Technical Bulletin June 2000
Alliance for Polyurethanes Industry

SECTION 5 Fire-fighting measures

Extinguishing media

- Foam.
- Dry chemical powder.

Special hazards arising from the substrate or mixture

Fire Incompatibility	‣ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear full body protective clothing with breathing apparatus. For amines: ‣ For firefighting, cleaning up large spills, and other emergency operations, workers must wear a self-contained breathing apparatus with full face-piece, operated in a pressure-demand mode. ‣ Airline and air purifying respirators should not be worn for firefighting or other emergency or upset conditions.
Fire/Explosion Hazard	‣ Combustible. ‣ Slight fire hazard when exposed to heat or flame. Combustion products include: carbon dioxide (CO_2) aldehydes nitrogen oxides (NO_x) other pyrolysis products typical of burning organic material. May emit corrosive fumes. **WARNING**: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	‣ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of

Continued...

	material. ▸ Check regularly for spills and leaks. Slippery when spilt. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. for amines: ▸ If possible (i.e., without risk of contact or exposure), stop the leak. ▸ Contain the spilled material by diking, then neutralize.
Major Spills	Slippery when spilt. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. For amines: ▸ First remove all ignition sources from the spill area. ▸ Have firefighting equipment nearby, and have firefighting personnel fully trained in the proper use of the equipment and in the procedures used in fighting a chemical fire.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ **DO NOT** store near acids, or oxidising agents ▸ No smoking, naked lights, heat or ignition sources.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Glass container is suitable for laboratory quantities ▸ Lined metal can, lined metal pail/ can. ▸ Plastic pail. For low viscosity materials ▸ Drums and jerricans must be of the non-removable head type. ▸ Where a can is to be used as an inner package, the can must have a screwed enclosure.
Storage incompatibility	Benzyl alcohol: ▸ may froth in contact with water ▸ slowly oxidises in air, oxygen forming benzaldehyde ▸ is incompatible with mineral acids, caustics, aliphatic amines, isocyanates ▸ reacts violently with strong oxidisers, and explosively with sulfuric acid at elevated temperatures ▸ corrodes aluminium at high temperatures ▸ is incompatible with aluminum, iron, steel ▸ attacks some nonfluorinated plastics; may attack, extract and dissolve polypropylene Benzyl alcohol contaminated with 1.4% hydrogen bromide and 1.2% of dissolved iron(II) polymerises exothermically above 100 deg. C. ▸ Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air. Amines are incompatible with: · isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. · strong reducing agents such as hydrides, due to the liberation of flammable gas. ▸ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates. ▸ Avoid contact with copper, aluminium and their alloys. ▸ Avoid reaction with oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	2,6-di-tert-butyl-4-methylphenol	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	2,6-di-tert-butyl-4-methylphenol	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	2,6-di-tert-butyl-4-methylphenol	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	2,6-di-tert-butyl-4-methylphenol	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	2,6-di-tert-butyl-4-methylphenol	2,6-Di-tert-butyl-p-cresol	10 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	m-xylenediamine	m-Xylene-alpha,alpha'-diamine	Not Available	Not Available	0.1 mg/m3	[skin]
US OSHA Permissible Exposure Limits (PELs) Table Z-1	p-tert-butylphenol	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available

Continued...

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	p-tert-butylphenol	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	p-tert-butylphenol	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	p-tert-butylphenol	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	p-tert-butylphenol	Particulates not otherwise regulated	Not Available	Not Available	Not Available	See Appendix D

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
benzyl alcohol	30 ppm	52 ppm	740 ppm
p-tert-butylphenol	1.5 mg/m3	40 mg/m3	240 mg/m3

Ingredient	Original IDLH	Revised IDLH
benzyl alcohol	Not Available	Not Available
salicylic acid	Not Available	Not Available
formaldehyde/ benzenamine, hydrogenated	Not Available	Not Available
4,4'-methylenebis(cyclohexylamine)	Not Available	Not Available
1,3-cyclohexanebis(methylamine)	Not Available	Not Available
2,6-di-tert-butyl-4-methylphenol	Not Available	Not Available
m-xylenediamine	Not Available	Not Available
isophorone diamine	Not Available	Not Available
p-tert-butylphenol	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
benzyl alcohol	E	≤ 0.1 ppm
salicylic acid	E	≤ 0.01 mg/m³
formaldehyde/ benzenamine, hydrogenated	E	≤ 0.1 ppm
4,4'-methylenebis(cyclohexylamine)	E	≤ 0.1 ppm
1,3-cyclohexanebis(methylamine)	D	> 0.1 to ≤ 1 ppm
isophorone diamine	D	> 0.1 to ≤ 1 ppm
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

Exposure controls

Appropriate engineering controls	**Unless written procedures, specific to the workplace are available, the following is intended as a guide:** ▸ **For Laboratory-scale handling of Substances assessed to be toxic by inhalation. *Quantities of up to 25 grams*** may be handled in Class II biological safety cabinets *; ***Quantities of 25 grams to 1 kilogram*** may be handled in Class II biological safety cabinets* or equivalent containment systems; ***Quantities exceeding 1 kg*** may be handled either using specific containment, a hood or Class II biological safety cabinet*, ▸ HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.
Individual protection measures, such as personal protective equipment	
Eye and face protection	When handling very small quantities of the material eye protection may not be required. For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs: ▸ Chemical goggles. For amines: SPECIAL PRECAUTION: ▸ Because amines are alkaline materials that can cause rapid and severe tissue damage, wearing of contact lenses while working with amines is strongly discouraged. Wearing such lenses can prolong contact of the eye tissue with the amine, thereby causing more severe damage.
Skin protection	See Hand protection below
Hands/feet protection	▸ Elbow length PVC gloves ▸ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. ▸ Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference. For amines: ▸ Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.
Body protection	See Other protection below

Continued...

Other protection	▸ Overalls. ▸ PVC Apron.

Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Where engineering controls are not feasible and work practices do not reduce airborne amine concentrations below recommended exposure limits, appropriate respiratory protection should be used. In such cases, air-purifying respirators equipped with cartridges designed to protect against amines are recommended.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Not Available

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	99	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	<5 g/l when mixed as intended

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation of amine vapours may cause irritation of the mucous membrane of the nose and throat, and lung irritation with respiratory distress and cough. Swelling and inflammation of the respiratory tract is seen in serious cases; with headache, nausea, faintness and anxiety.

Continued...

	Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine asthma". The compound causes intestinal irritation due to its caustic nature. Lower doses may cause impaired appetite, sluggish reaction to stimuli and reduced alertness. Inhalation of benzyl alcohol may affect breathing (causing depression and paralysis of breathing and lower blood pressure. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache and even nausea.
Ingestion	Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow. Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucous. Amines without benzene rings when swallowed are absorbed throughout the gut. Corrosive action may cause damage throughout the gastrointestinal tract. High oral doses of salicylates, such as aspirin, may cause a mild burning pain in the throat and stomach, causing vomiting. This is followed (within hours) by deep, rapid breathing, tiredness, nausea and further vomiting, thirst and diarrhoea. The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. Swallowing large doses of benzyl alcohol may cause abdominal pain, nausea, vomiting and diarrhea. It may affect behaviour and/or the central nervous system, and cause headache, sleepiness, excitement, dizziness, inco-ordination, coma, convulsions and other symptoms of central nervous system depression. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal. Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Skin Contact	Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Volatile amine vapours produce irritation and inflammation of the skin. Direct contact can cause burns. Amine epoxy-curing agents (hardeners) may produce primary skin irritation and sensitisation dermatitis in predisposed individuals. Cutaneous reactions include erythema, intolerable itching and severe facial swelling. Undiluted benzene-1,3-dimethanamine may be corrosive to the skin. Concentrated solution of the material produces severe reddening and irritation. Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Skin contact with the material may be harmful; systemic effects may result following absorption. There is some evidence to suggest that the material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.
Eye	If applied to the eyes, this material causes severe eye damage. Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Vapours of volatile amines irritate the eyes, causing excessive secretion of tears, inflammation of the conjunctiva and slight swelling of the cornea, resulting in "halos" around lights. This effect is temporary, lasting only for a few hours.
Chronic	There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Chronic exposure to salicylates produce problems with metabolism, central nervous system disturbances, or kidney damage. Those with pre-existing damage to the eye, skin or kidney are especially at risk. Prolonged or repeated exposure to benzyl alcohol may cause allergic contact dermatitis (skin inflammation). Prolonged or repeated swallowing may affect behaviour and the central nervous system with symptoms similar to acute swallowing.

Retro-Coat Clear Part B	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
benzyl alcohol	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 2000 mg/kg[2]	Eye (rabbit): 0.75 mg open SEVERE
	Inhalation(Rat) LC50: >4.178 mg/L4h[2]	Eye: adverse effect observed (irritating)[1]
	Oral (Rat) LD50: 1230 mg/kg[2]	Skin (man): 16 mg/48h-mild
		Skin (rabbit):10 mg/24h open-mild
		Skin: no adverse effect observed (not irritating)[1]
salicylic acid	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[2]	Eye (rabbit): 100 mg - SEVERE [*BDH], [**Extal]
	Inhalation(Rat) LC50: >0.225 mg/l4h[2]	Eye: adverse effect observed (irritating)[1]

Continued...

	Oral (Cat) LD50; 400 mg/kg[2]	Skin (rabbit): 500 mg/24h - mild
		Skin: no adverse effect observed (not irritating)[1]

formaldehyde/ benzenamine, hydrogenated	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1000 mg/kg[1]	Skin: adverse effect observed (corrosive)[1]
	Oral (Rat) LD50: >50<300 mg/kg[1]	

4,4'-methylenebis(cyclohexylamine)	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1000 mg/kg[1]	Eye (rabbit): 10uL./24h SEVERE
	Inhalation(Mouse) LC50; 0.4 mg/l4h[2]	Eye: adverse effect observed (irreversible damage)[1]
	Oral (Rat) LD50: 350 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
		Skin (rabbit): SEVERE Corrosive ** * [Air Products and Chemicals] ** [BASF CCINFO 1882394]
		Skin: adverse effect observed (corrosive)[1]

1,3-cyclohexanebis(methylamine)	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 1700 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
	Oral (Rat) LD50: >200<2000 mg/kg[1]	Skin: adverse effect observed (corrosive)[1]

2,6-di-tert-butyl-4-methylphenol	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[2]	Eye (rabbit): 100 mg/24h-moderate
	Oral (Rat) LD50: 890 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
		Skin (human): 500 mg/48h - mild
		Skin (rabbit):500 mg/48h-moderate
		Skin: no adverse effect observed (not irritating)[1]

m-xylenediamine	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 2000 mg/kg[2]	Eye (rabbit): 0.05 mg/24h SEVERE
	Inhalation(Rat) LC50: 0.8 mg/l4h[1]	Skin (rabbit): 0.75 mg/24h SEVERE
	Oral (Rat) LD50: >200 mg/kg[1]	

isophorone diamine	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Not Available
	Inhalation(Rat) LC50: >=1.07<=5.01 mg/l4h[1]	
	Oral (Rat) LD50: 1030 mg/kg[2]	

p-tert-butylphenol	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 2288 mg/kg[2]	Eye (rabbit) 0.05 mg/24h - SEVERE
	Oral (Rat) LD50: >2000 mg/kg[1]	Eye (rabbit): 10 mg - SEVERE
		Eye: adverse effect observed (irritating)[1]
		Skin (rabbit): 500 mg/4h - mild
		Skin: adverse effect observed (irritating)[1]

Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

Retro-Coat Clear Part B	Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.
BENZYL ALCOHOL	Unlike benzylic alcohols, the beta-hydroxyl group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only of negligible concern due to limited similarity in their pattern of activity. For benzoates: Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmful and of low acute toxicity. This is a member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS), based partly on their self-limiting properties as flavouring substances in food. In humans and other animals, they are rapidly absorbed, broken down and excreted, with a wide safety margin. The aryl alkyl alcohol (AAA) fragrance ingredients have diverse chemical structures, with similar metabolic and toxicity profiles. The AAA fragrances demonstrate low acute and subchronic toxicity by skin contact and swallowing.
SALICYLIC ACID	For certain benzyl derivatives: The members of this group are rapidly absorbed through the gastrointestinal tract, metabolised primarily in the liver, and excreted primarily in the urine either unchanged or as conjugates of benzoic acid derivatives. At high dose levels, gut micro-organisms may act to produce minor amounts of breakdown products. A member or analogue of a group of hydroxy and alkoxy-substituted benzyl derivatives generally regarded as safe (GRAS) based in part on their self-limiting properties as flavouring substances in food; their rapid absorption. metabolic detoxification, and excretion in humans and other animals, their low level of flavour use, the wide margin of safety between the conservative estimates of intake

Continued...

	and the no-observed-adverse effect levels determined from chronic and subchronic studies and the lack of significant genotoxic and mutagenic potential.
FORMALDEHYDE/ BENZENAMINE, HYDROGENATED	Amine adducts have much reduced volatility and are less irritating to the skin and eyes than amine hardeners. However commercial amine adducts may contain a percentage of unreacted amine and all unnecessary contact should be avoided. No significant acute toxicological data identified in literature search.
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
1,3-CYCLOHEXANEBIS(METHYLAMINE)	Gastrointestinal changes recorded. For 1,3-cyclohexanebis(methylamine) (CHBM): Animal testing shows that CHBMhas low to moderate acute toxicity by swallowing and moderate acute toxicity by skin contact. It is corrosive to the eyes and skin.
2,6-DI-TERT-BUTYL-4-METHYLPHENOL	* Degussa SDS Effects such as behavioral changes, reduction in body weight gain, and decrement in body weight have been observed after long-term administration of BHT to mice and rats. Toxic effects may be attributed more to BHT metabolites than to their parent compound, only a few studies have focused on their carcinogenicity and toxicity, and not only on that of BHT. The metabolite BHT-QM (syn: 2,6-di-tert-butyl-1,4-methylene-2,5-cyclohexadien-1-one, CAS RN: 2607-52-5) is a very reactive compound which is considered to play a significant role in hepatoxicity, pneumotoxicity, and skin tumor promotion in mice. BHT has been reported to exert prooxidant effects under certain conditions. Thus, when BHT was added in excess to a wheat seedling medium in aerobic conditions, an enhancement of the generation rate of superoxide anion was observed. Some authors have reported that at high aeration rate, BHT can react with molecular oxygen rather than with the reactive oxygen species present, yielding BHT-phenoxyl radical and superoxide anion. In addition, the phenolic radical itself may undergo redox recycling which can be a critical factor depending on the reductant involved However, it has to be noted that BHT-phenoxyl radical has been reported to be relatively stable. Furthermore, the potential reactivity of BHT-derived metabolites should be taken into account; some studies reported that not only BHT but also its metabolites, such as BHT-Q and BHT-QM, can act as prooxidant. As BHT undergoes several reactions during biotransformation, a large number of intermediate metabolites have been identified. However, their nature and concentration depend on the environmental conditions and on the animal species. Although the changes undergone by BHT during in vivo digestion processes have not been studied, after submission of a fluid deep-frying fat containing BHT and BHT-QM to an in vitro gastrointestinal digestion model, both these were detected in the digested samples. These results indicate that BHT and its toxic metabolite could remain bioaccessible for intestinal absorption. Studies concerning BHT metabolism have shown that, unlike other synthetic antioxidants, BHT is a potent inducer of the microsomal monooxygenase system and its major route of degradation is oxidation catalyzed by cytochrome P450. Studies have reported potential toxicity derived from the ingestion or administration of BHT. As for acute oral toxicity, although this is considered low in animals, it must be noted that 2 clinical cases were reported in patients who suffered acute neurotoxicity and gastritis after ingesting a high dose of BHT (4 and 80 g without medical prescription) to cure recurrent genital herpes. Regarding short-term subchronic toxicity studies, it has been reported that BHT causes dose-related increase in the incidence and severity of toxic nephrosis in mice, nephrotoxicity and pneumotoxicity in rats, and in chicken a marked congestion of the liver and kidney, as well as diffuse enlargement of the liver with rounded borders and rupture with hemorrhaging . It has to be noted that the EFSA Panel (2012) pointed out certain inconsistencies in the findings obtained from the short-term and subchronic toxicity studies. Several genotoxicity studies on BHT concluded that BHT does not represent a genotoxic risk, because most of the studies carried out to that date had shown BHT was not able to induce mutations or to damage deoxyribonucleic acid (DNA). Nevertheless, it must be mentioned that other studies reported contrary results. The effect of BHT and 7 of its metabolites on in vitro DNA cleavage was studied and the metabolites BHT-Q (syn: 2,6-di-tert-butyl-2,5-cyclohexadiene-1,4-dione, CAS RN: 719-22-2), BHT-CHO (syn: 3,5-di-tert-butyl-4-hydroxybenzaldehyde, CAS RN: 1620-98-0 and BHT-OOH (syn: 2,6-di-tert-butyl-4-methyl-4-hydroperoxy-2,5-cyclohexadien-1-one, CAS RN: 6485-57-0) were able to cleave DNA.. The Panel on Food Additives and Nutrient Sources Added to Food of the European Food Safety Authority (EFSA) recognized that these positive genotoxicity results may be due to the prooxidative chemistry of BHT, which gives rise to reactive metabolites. Some studies addressed the carcinogenicity and chronic toxicity of BHT and its metabolites in rodents with contradictory results. Thus, mice-fed dietary BHT for a year developed marked hyperplasia of the hepatic bile ducts with an associated subacute cholangitis Moreover, after 104 wk of administration of BHT, the formation of hepatocellular tumors in male mice was observed. Several studies have demonstrated the potential of BHT to act either as a tumor promotor or as a tumor suppressor, modulating the carcinogenicity of some well-known carcinogens. Barbara Nieva-Echevarria etal: Comprehensive reviews in Food Science and Food Safety, Vol 14, Dec 2014 http://onlinelibrary.wiley.com/doi/10.1111/1541-4337.12121/pdf for bridged alkyl phenols: **Acute toxicity:** Acute oral and dermal toxicity data are available for all but two of the substances in the group. The data show that acute toxicity of these substances is low. Data show that acute toxicity following oral and topical use of hindered phenols is low. They are not proven to cause mutations. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.
M-XYLENEDIAMINE	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. For benzene-1,3-dimethanamine (m-xylene-alpha,alpha -diamine): Animal testing showed that benzene-1,3-methanamine caused tissue damage to the digestive and respiratory organs, if given by mouth or inhaled, respectively. The chemical is corrosive to animal skin, and may cause sensitization.
ISOPHORONE DIAMINE	Isophorone diamine is a strong skin irritant, corrosive with repeated application. Frequent occupational exposure may lead to the development of allergic skin inflammation. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
P-TERT-BUTYLPHENOL	These substances are intravenous anaesthetic agents. They have a very low level of acute toxicity; they may cause skin irritation. For p-tert-butylphenol: p-tert-butylphenol has low acute toxicity via all routes. It irritates the skin, eyes and airway.
Retro-Coat Clear Part B & SALICYLIC ACID & FORMALDEHYDE/ BENZENAMINE, HYDROGENATED & 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 1,3-CYCLOHEXANEBIS(METHYLAMINE) & 2,6-DI-TERT-BUTYL-4-METHYLPHENOL & M-XYLENEDIAMINE & ISOPHORONE DIAMINE & P-TERT-BUTYLPHENOL	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.
Retro-Coat Clear Part B & BENZYL ALCOHOL	Adverse reactions to fragrances in perfumes and fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and connubial contact dermatitis occurs. Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only when attached to a

Continued...

	carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation.
Retro-Coat Clear Part B & SALICYLIC ACID	The salicylates are well absorbed by mouth, and oral bioavailability is assumed to be total. In humans, absorption through skin is more limited.
Retro-Coat Clear Part B & 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & M-XYLENEDIAMINE	Overexposure to most of these materials may cause adverse health effects. Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient. There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing. Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs.
BENZYL ALCOHOL & 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 1,3-CYCLOHEXANEBIS(METHYLAMINE) & M-XYLENEDIAMINE & ISOPHORONE DIAMINE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema.
BENZYL ALCOHOL & SALICYLIC ACID & 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 2,6-DI-TERT-BUTYL-4-METHYLPHENOL & ISOPHORONE DIAMINE & P-TERT-BUTYLPHENOL	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
SALICYLIC ACID & 1,3-CYCLOHEXANEBIS(METHYLAMINE) & M-XYLENEDIAMINE & P-TERT-BUTYLPHENOL	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 1,3-CYCLOHEXANEBIS(METHYLAMINE) & ISOPHORONE DIAMINE	The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.
1,3-CYCLOHEXANEBIS(METHYLAMINE) & M-XYLENEDIAMINE	The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

Acute Toxicity	✔	**Carcinogenicity**	✔
Skin Irritation/Corrosion	✔	**Reproductivity**	✔
Serious Eye Damage/Irritation	✔	**STOT - Single Exposure**	✔
Respiratory or Skin sensitisation	✔	**STOT - Repeated Exposure**	✔
Mutagenicity	✔	**Aspiration Hazard**	✘

Legend: ✘ *– Data either not available or does not fill the criteria for classification*
✔ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Retro-Coat Clear Part B

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

benzyl alcohol

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	10mg/l	4
EC50	72h	Algae or other aquatic plants	500mg/l	2
EC50	48h	Crustacea	230mg/l	2
NOEC(ECx)	336h	Fish	5.1mg/l	2
EC50	96h	Algae or other aquatic plants	76.828mg/l	2

salicylic acid

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	504h	Crustacea	<1mg/l	4
LC50	96h	Fish	>100mg/l	2
EC50	72h	Algae or other aquatic plants	>100mg/l	2
EC50	48h	Crustacea	118mg/l	2

formaldehyde/ benzenamine, hydrogenated

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	63mg/l	2
EC50	72h	Algae or other aquatic plants	43.94mg/l	2
EC50	48h	Crustacea	15.4mg/l	2
EC10(ECx)	72h	Algae or other aquatic plants	1.2mg/l	2

4,4'-methylenebis(cyclohexylamine)

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	68mg/l	2
EC50	72h	Algae or other aquatic plants	140-200mg/l	2

Continued...

	EC50	48h	Crustacea	6.84mg/l	2
	NOEC(ECx)	336h	Fish	>1mg/l	2

1,3-cyclohexanebis(methylamine)					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	NOEC(ECx)	72h	Algae or other aquatic plants	13.7mg/l	2
	EC50	72h	Algae or other aquatic plants	29.7mg/l	2
	LC50	96h	Fish	130mg/l	2
	EC50	48h	Crustacea	33.1mg/l	2

2,6-di-tert-butyl-4-methylphenol					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	ErC50	72h	Algae or other aquatic plants	>0.42mg/l	1
	BCF	1344h	Fish	220-2800	7
	LC50	96h	Fish	>0.5mg/l	Not Available
	EC50	72h	Algae or other aquatic plants	>0.42mg/l	1
	EC50	48h	Crustacea	>0.17mg/l	2
	EC0(ECx)	48h	Crustacea	>=0.31mg/l	1
	EC50	96h	Algae or other aquatic plants	0.758mg/l	2

m-xylenediamine					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	BCF	1008h	Fish	<0.3	7
	LC50	96h	Fish	75mg/l	2
	EC50	72h	Algae or other aquatic plants	12mg/l	2
	EC50	48h	Crustacea	15.2mg/l	2
	NOEC(ECx)	504h	Crustacea	4.7mg/l	2

isophorone diamine					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	BCF	1008h	Fish	<0.3	7
	NOEC(ECx)	72h	Algae or other aquatic plants	1.5mg/l	1
	EC50	72h	Algae or other aquatic plants	37mg/l	1
	LC50	96h	Fish	70mg/l	1
	EC50	48h	Crustacea	14.6-21.5mg/l	4

p-tert-butylphenol					
	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
	NOEC(ECx)	Not Reportedh	Crustacea	0.01mg/l	4
	EC50	72h	Algae or other aquatic plants	~2.4mg/l	2
	LC50	96h	Fish	>1mg/l	2
	EC50	48h	Crustacea	3.4-4.5mg/l	4

Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

For isophorone diamine:
Persistence/Biodegradability: 42% (DOC, OECD 303A) *8.0% (DOC, Die away test -9/69/EEC)*
* [Morton]
Environmental Fate:
Isophorone diamine has a melting point of 10 C, it mixes with water and has a vapour pressure of 0.02 hPa at 20 C. The measured log Kow is 0.99 (23 C). The pKa of approximately 10.4 characterises the substance as a moderate base.
For benzene-1,3-dimethanamine (m-xylene-alpha,alpha'- diamine)
Environmental fate:
The chemical has a log Pow value of 0.18 at 2 a vapour pressure 5 C, of 0.04 hPa at 25 C, and a water solubility of > 100 000 mg/L. Fugacity model Mackay level III calculations suggest that the majority of the chemical would distribute to soil if released to soil and/or air compartment(s), and water if released to aquatic compartment.
For benzyl alcohol: log Kow : 1.1Koc : <5Henry's atm m3 /mol: 3.91E-07BOD 5: 1.55-1.6,33-62%COD : 96%ThOD : 2.519BCF : 4
Bioaccumulation: Not significant
Anaerobic Effects: Significant degradation.
Effects on algae and plankton: Inhibits degradation of glucose
Degradation Biological: Significant processes
Abiotic: RxnOH*,no photochem
Ecotoxicity: Fish LC50 (48 h): fathead minnow 770 mg/l; (72 h): 480 mg/l; (96 h) 460 mg/l.
Prevent, by any means available, spillage from entering drains or water courses.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
benzyl alcohol	LOW	LOW
salicylic acid	LOW	LOW
4,4'-methylenebis(cyclohexylamine)	HIGH	HIGH
1,3-cyclohexanebis(methylamine)	LOW	LOW

Continued...

Ingredient	Persistence: Water/Soil	Persistence: Air
2,6-di-tert-butyl-4-methylphenol	HIGH	HIGH
m-xylenediamine	HIGH	HIGH
isophorone diamine	HIGH	HIGH
p-tert-butylphenol	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
benzyl alcohol	LOW (LogKOW = 1.1)
salicylic acid	MEDIUM (BCF = 1000)
4,4'-methylenebis(cyclohexylamine)	LOW (LogKOW = 3.2649)
1,3-cyclohexanebis(methylamine)	LOW (LogKOW = 1.0688)
2,6-di-tert-butyl-4-methylphenol	HIGH (BCF = 2500)
m-xylenediamine	LOW (BCF = 2.7)
isophorone diamine	LOW (BCF = 3.4)
p-tert-butylphenol	LOW (BCF = 240)

Mobility in soil

Ingredient	Mobility
benzyl alcohol	LOW (KOC = 15.66)
salicylic acid	LOW (KOC = 23.96)
4,4'-methylenebis(cyclohexylamine)	LOW (KOC = 672.4)
1,3-cyclohexanebis(methylamine)	LOW (KOC = 914.6)
2,6-di-tert-butyl-4-methylphenol	LOW (KOC = 23030)
m-xylenediamine	LOW (KOC = 914.6)
isophorone diamine	LOW (KOC = 340.4)
p-tert-butylphenol	LOW (KOC = 1912)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ Recycle wherever possible. ▸ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Excepted Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

Land transport (DOT)

UN number or ID number	2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (contains isophorone diamine)
Transport hazard class(es)	Class: 8 Subsidiary risk: Not Applicable
Packing group	III

Continued...

Environmental hazard	Environmentally hazardous
Special precautions for user	Hazard Label: 8 Special provisions: IB3, T7, TP1, TP28

Air transport (ICAO-IATA / DGR)

UN number	2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (contains isophorone diamine)
Transport hazard class(es)	ICAO/IATA Class: 8 ICAO / IATA Subrisk: Not Applicable ERG Code: 8L
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions: A3 A803 Cargo Only Packing Instructions: 856 Cargo Only Maximum Qty / Pack: 60 L Passenger and Cargo Packing Instructions: 852 Passenger and Cargo Maximum Qty / Pack: 5 L Passenger and Cargo Limited Quantity Packing Instructions: Y841 Passenger and Cargo Limited Maximum Qty / Pack: 1 L

Sea transport (IMDG-Code / GGVSee)

UN number	2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (contains isophorone diamine)
Transport hazard class(es)	IMDG Class: 8 IMDG Subrisk: Not Applicable
Packing group	III
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number: F-A, S-B Special provisions: 223 274 Limited Quantities: 5 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
benzyl alcohol	Not Available
salicylic acid	Not Available
formaldehyde/ benzenamine, hydrogenated	Not Available
4,4'-methylenebis(cyclohexylamine)	Not Available
1,3-cyclohexanebis(methylamine)	Not Available
2,6-di-tert-butyl-4-methylphenol	Not Available
m-xylenediamine	Not Available
isophorone diamine	Not Available
p-tert-butylphenol	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
benzyl alcohol	Not Available
salicylic acid	Not Available
formaldehyde/ benzenamine, hydrogenated	Not Available
4,4'-methylenebis(cyclohexylamine)	Not Available
1,3-cyclohexanebis(methylamine)	Not Available
2,6-di-tert-butyl-4-methylphenol	Not Available
m-xylenediamine	Not Available

Continued...

Product name	Ship Type
isophorone diamine	Not Available
p-tert-butylphenol	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

benzyl alcohol is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals
US AIHA Workplace Environmental Exposure Levels (WEELs)
US DOE Temporary Emergency Exposure Limits (TEELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

salicylic acid is found on the following regulatory lists

FEI Equine Prohibited Substances List - Controlled Medication
FEI Equine Prohibited Substances List (EPSL)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

formaldehyde/ benzenamine, hydrogenated is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

4,4'-methylenebis(cyclohexylamine) is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

1,3-cyclohexanebis(methylamine) is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

2,6-di-tert-butyl-4-methylphenol is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5
US - Massachusetts - Right To Know Listed Chemicals
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US OSHA Permissible Exposure Limits (PELs) Table Z-3
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

m-xylenediamine is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals
US NIOSH Recommended Exposure Limits (RELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

isophorone diamine is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

p-tert-butylphenol is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US OSHA Permissible Exposure Limits (PELs) Table Z-3
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	Yes
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	Yes
Acute toxicity (any route of exposure)	Yes
Reproductive toxicity	Yes
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes

Continued...

Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	Yes
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65

None listed

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (benzyl alcohol; salicylic acid; formaldehyde/ benzenamine, hydrogenated; 4,4'-methylenebis(cyclohexylamine); 1,3-cyclohexanebis(methylamine); m-xylenediamine; p-tert-butylphenol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (formaldehyde/ benzenamine, hydrogenated)
Japan - ENCS	No (formaldehyde/ benzenamine, hydrogenated)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (formaldehyde/ benzenamine, hydrogenated; 4,4'-methylenebis(cyclohexylamine); 1,3-cyclohexanebis(methylamine))
Vietnam - NCI	Yes
Russia - FBEPH	No (formaldehyde/ benzenamine, hydrogenated)
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

SECTION 16 Other information

Revision Date	04/18/2023
Initial Date	06/22/2020

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
1.2	04/18/2023	Composition / information on ingredients - Ingredients, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index
AIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List

Continued...

IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Powered by AuthorITe, from Chemwatch.

Land Science
a division of REGENESIS

Retro-Coat®
Vapor Intrusion Coating

TECHNICAL DATA SHEET

SCOPE

Product and Application
This specification describes the application of the Retro-Coat® System. The minimum thickness of the system is between 26-30 mils, including a 20 mil minimum application of Retro-Coat.

Key Benefits

- Designed specifically to mitigate vapor intrusion in existing structures
- Retro-Coat is a wearing surface, meaning no additional concrete protection is necessary
- No odor and fast cure time reduce building downtime
- Carpet, tile, linoleum or other floor coverings can be applied directly over Retro-Coat, if desired
- Retro-Coat can increase the performance of an existing active sub-slab depressurization system
- Retro-Coat can aid in the retiring of existing active systems
- Available and installed by Land Science Technologies certified contractors

Acceptable Manufacturers
Retro-Coat as manufactured by Land Science San Clemente, CA.

Applicator
Applicator must be a certified contractor of Land Science.

Performance Criteria
Retro-Coat as manufactured by Land Science San Clemente, CA.

Diffusion Coeffcient PCE: TCE:	(Columbia Labs) 7.6×10^{-14} m²/s 8.2×10^{-14} m²/s
Tensile Strength Minimum:	ASTM D-638 9,800 PSI
Tensile Elongation Minimum:	ASTM D-638 6%
Flexural Strength Minimum:	ASTM D-790 7,035 PSI
Hardness, Shore D Maximum:	ASTM D-2240 83
Gardner Impact Minimum:	ASTM D-2794 80 inch-pounds
Bond Strength Minimum:	(to quarry tile) 1,000 PSI
Vapor Transmission Rate Maximum:	ASTM E-96 0.07 perms
Water Absorption Maximum:	ASTM D-570 0.02% in 24 hours
60° Gloss Minimum:	 100

Materials
Retro-Coat “A” shall be a modified epoxy containing special flexibilizers and specially formulated resins for superior chemical resistance and enhanced resilience. No solvents are allowed.

Retro-Coat “B” shall be customized blend of hardeners specifically formulated to maximize chemical resistance.

© 2021 Land Science All Rights Reserved. Land Science and Retro-Coat are registered trademarks of REGENESIS Bioremediation Products, Inc. All other trademarks are property of their respective owners.

APPLICATION

Surface Preparation

All existing surfaces that will be covered with the systems specified herein should be mechanically ground, shot blasted or sand blasted to yield a minimum 60 grit surface texture. All loosely adhered coatings will be removed. Any grease and other contaminants found on the concrete must also be removed.

All open cracks 1/2" and greater should be v-notched to a 3/4" width by 1/2" depth and cleaned of any debris. Such cracks should be filled with Retro-Coat Gel and struck off flush with the surrounding surface.

Cut back and/or remove any expansion joint backing or filler strips to a minimum of 1 ½" deep. Insert disposable filler in the joints to prevent filling with the overlayment materials and to allow for accurate location of final saw cuts in the overlayment.

Material Application

Retro-Coat 2-Part Caulk

Apply Retro-Coat 2-Part Caulk around the base of all pipe penetrations making sure to fill any gap between the penetration and concrete slab

Apply Retro-Coat 2-Part Caulk to the joint created between horizontal and vertical transitions. The caulking material should be applied and pressed into the joint filling any gaps that might be present.

Retro-Coat PRIMER

Apply Retro-Coat PRIMER to all areas at a thickness of 6 mil and allow to dry tack free. In areas where the concrete surface is in need of slight repair or needs to be leveled, a slurry form of Retro-Coat PRIMER called Retro-Coat PRIMER-S can be applied with a flat squeegee. Retro-Coat PRIMER-S is self priming and does not need to be primed again.



Completed surface preparation consisting of shot blasting, Retro-Coat PREP, to fill joints and cracks and a 6 mil application of Retro-Coat PRIMER

APPLICATION

Retro-Coat
Mix Retro-Coat, Part A with a low-speed (<750 rpm) jiffy-style mixer for about 30 seconds, or until uniform in color, then mix in Retro-Coat Coating, Part B for another 30-60 seconds.

Dump contents onto floor in a ribbon pattern, squeegee, and then back roll at a coverage rate of 160 SF/gallon to achieve a film thickness of 10 mils.

Apply second coat 10 mil coat to achieve a total thickness of 20 mils. Repeat as necessary to achieve specified thickness.

If a flooring material will be placed over Retro-Coat after it is applied, or appearance is not a priority, (1) 20 mil coat can be applied.

Retro-Coat TOP WB
Retro-Coat TOP WB can be installed for aesthetic purposes to protect the Retro-Coat system from ambering or color fading due to fluorescent and UV light exposure.

Apply Retro-Coat TOP WB in two (2) 7-8 wet mil coats to achieve 7-8 dry mils.

Protection of Finished Work

Prohibit foot traffic on floor for 24 hours after laying (at 70°F). At 50°F, this time should be extended to 48 hours.

Rinse off any chemicals that may come in contact within 7 days of installation with the freshly laid floor immediately.



Application of Retro-Coat SEALANT to a 20 mil total thickness

Cleanup

Properly dispose of all unused and waste materials.

Tools can be washed in warm, soapy water when wet, but after drying, can only be cleaned by grinding or with a paint stripper.

Unused resin can be set off with proper amount of hardener and disposed of in regular trash bins.

QUALITY CONTROL

Warranty

Land Science warrants Retro-Coat to be free from defects for a period of one (1) year from the date when applied in accordance to Land Science's directions for application.

Bond failure, peeling or delamination due to water or moisture intrusion through the slab substrate will not be covered, nor will any defects to the Retro-Coat layer caused by osmotic vapor blistering.

Due to uncontrolled color tinting from each color batch, colors, textures, patterns, and shading may vary from job to job and throughout larger areas. Color and texture samples used by Land Science are approximate only and may vary from the completed project.

Any damage to the coating that is caused by movement of the underlying substrate (i.e., concrete, joint material or other such underlayment), such as concrete cracking, movement of concrete, and joints expanding, will not be covered by the warranty. Additionally, some tires may leave an amber colored tire tread mark impregnated into the top layer, this is not covered under the warranty.

Any repairs and/or corrections will be for the defective area only, unless deemed otherwise by Land Science. Due to the custom nature of Land Science coatings, any repairs and or corrections may not match the original work. Land Science will not re-install a brand new flooring system to the entire floor due to colors, gloss or sheen difference, texture difference and/or chips not matching.

Resinous coatings are odorous; we recommend turning off air handlers prior to installation. We hold no liability for these chemical odors.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THE REMEDY PERMITTED HEREIN SHALL BE THE EXCLUSIVE REMEDY OF THE BUYER. SELLER'S LIABILITY SHALL BE LIMITED TO REPLACEMENT OF DEFECTIVE MATERIAL. IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL, PUNITIVE, CONSEQUENTIAL OR INCIDENTAL DAMAGES. THIS PARAGRAPH IS NOT APPLICABLE IN CONSUMER TRANSACTION OR WHERE PROHIBITED BY LAW.

Quality Control

Installer shall use a notched squeegee to apply Retro-Coat to the specified mil thickness and calculations shall be done to determine if the correct amount of material has been applied. Retro-Coat contains 100% solids at the time of application; therefore no material shrinkage will occur during the curing process. One gallon will cover 80 square feet.

A wet mil film gauge can be used to spot check the Retro-Coat thickness to make certain the minimum 20 mil thickness has been applied, though some discretion should be used because high points or low points on the underlying surface can adversely affect the thickness measurements.

Floor Care

The standard smooth surface of Retro-Coat should be cleaned on a regular basis by damp mopping the floor with conventional commercial cleaners. It is important to first remove any grease or oils by a suitable cleaner, preferably a citrus based cleaner. Rinse with clear water to help eliminate film buildup and then allow to dry.

⚠ ***Never use abrasive powder cleaners like Ajax or Comet as they tend to scratch the floor.***

- Additional steps can also be taken to prolong the look and life of a seamless floor:
- Protect the floor during transference of heavy equipment
- Educate the drivers inside the building of the importance of avoiding “jack-rabbit” starts and stops, as well as keeping the metal forks lifted
- Regular cleaning should take place as to not allow the buildup of abrasive material, such as sand or dirt, on the coating
- Eliminate all metal wheels
- Change over to light-colored polyurethane wheels
- Do not slide heavy metal totes, drums or bins across the floor
- Immediately hose down chemical spills, especially on newly laid floors.

TNEMEC

ELASTO-GRIP® FC 151-1051

PRODUCT DATA SHEET

PRODUCT PROFILE

GENERIC DESCRIPTION Waterborne Modified Polyamine Epoxy

COMMON USAGE Penetrating, flexible and low-odor primer for sealing cementitious and other porous substrates. Also excellent as a tie-coat for specialized finishes over sound existing coatings.

COLORS Green

FINISH Matte

COATING SYSTEM

TOPCOATS Series 2H, 6, 30, L69, L69F, N69, N69F, V69, V69F, 84, 113, 114, 115, 156, 157, 158, 180, 181, 280, 1028, 1029

SURFACE PREPARATION

CRACKS Repair masonry as necessary with 152 tape. Refer to 152 product data sheet for additional details.

DRYWALL Sand joint compound smooth and feather edge.

WOOD Sand rough areas. Seal knots and pitch pockets. Fill cracks and nail holes after primer has cured.

PAINTED SURFACES Remove old paint not tightly bonded to the surface. A test patch is recommended to determine compatibility of 151 over unknown previously-applied coatings.

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants. Allow new concrete, plaster, stucco and masonry to cure for 14 days. Level protrusions and mortar spatter. Fill block with an appropriate masonry filler if a smoother appearance is desired.

TECHNICAL DATA

VOLUME SOLIDS 17.0 ± 2.0%

RECOMMENDED DFT 0.7 to 1.5 mils (18 to 38 microns) per coat (non-absorbent substrates).

CURING TIME

Temperature	To Touch	To Recoat
75°F (24°C) 50% Relative Humidity	1 1/2 hours	3 1/2 hours minimum 7 days maximum

If more than 7 days have elapsed after applying 151, apply a refresher coat before topcoating. Higher humidities and/or lower temperatures increase the cure time.

VOLATILE ORGANIC COMPOUNDS Unthinned: 1.46 lbs/gallon (175 grams/litre)

THEORETICAL COVERAGE 273 mil sq ft/gal (6.7 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS Two: Part A and Part B

PACKAGING Five-Gallon Kit: Consists of 4.0 gallons of Part A in a 5-gallon plastic pail and a full filled gallon can of Part B. When mixed, yields five gallons (18.9L).
One-Gallon Kit: Consists of a partially filled one-gallon can labeled Part A and a partially filled quart can labeled Part B. When mixed, yields one gallon (3.79L).

NET WEIGHT PER GALLON 8.58 ± 0.5 lbs (3.84 ± .11 kg) (mixed)

STORAGE TEMPERATURE Minimum 35°F (2°C) Maximum 110°F (43°C)

SHELF LIFE 24 months at recommended storage temperature.

FLASH POINT - SETA N/A

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

© August 25, 2009 by Tnemec Co., Inc.

Published technical data and instructions are subject to change without notice. The online catalog at www.tnemec.com should be referenced for the most current technical data and instructions or you may contact your Tnemec representative for current technical data and instructions.

ELASTO-GRIP® FC | 151-1051

APPLICATION

COVERAGE RATES One gallon will cover from 180 to 400 sq ft (16.7 to 37.2 m²). Highly porous or rough/irregular surface will reduce coverage. Application of coating below minimum or above maximum dry mil thickness recommended may adversely affect coating performance.

MIXING Stir contents of the can marked Part A. Add the contents of the can marked Part B to Part A while under agitation. Continue agitation until the two components are thoroughly mixed. Do not use mixed material beyond pot life limits. Unused material must be kept tightly closed at all times.

THINNING Not recommended.

POT LIFE At 77°F (25°C): 12 hours.

APPLICATION EQUIPMENT Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.013"-0.019" (330-485 microns)	2500-3000 psi (172-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Roller: Use short synthetic nap rollers for smooth surfaces. Use long synthetic nap rollers for rough surfaces.
Brush: Soft nylon or synthetic bristles.

SURFACE TEMPERATURE Minimum 40°F (4°C) Maximum 120°F (49°C)
The surface should be dry and at least 5°F (3°C) above the dew point.

CLEANUP Flush and clean all equipment immediately after use with warm, soapy water. Flush spray equipment with a final rinse of ethanol or isopropyl alcohol.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

© August 25, 2009 by Tnemec Co., Inc.

Safety Data Sheet

Issue Date 24-Oct-2018 **Revision Date** 24-Oct-2018 **Revision Number** 7

1. IDENTIFICATION

Product identifier

Product Code F151-1051A
Product Name ELASTO-GRIP FC

Other means of identification

Common Name SERIES 151, PART A
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 816-474-3400

Distributor
Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203, Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Causes serious eye irritation
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure



Appearance opaque **Physical state** liquid **Odor** Slight

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Do not breathe dust/fume/gas/mist/vapors/spray
Do not eat, drink or smoke when using this product

Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Storage
Store locked up
Keep away from children

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other information
Causes mild skin irritation
Toxic to aquatic life with long lasting effects
Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).
Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs
Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data.
SEE SAFETY DATA SHEET
Acute Toxicity 30.11817 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
EPOXY RESIN	-	10 - <30%
PROPRIETARY SOLVENT	-	1 - <10%
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	124-17-4	1 - <10%
BENZYL ALCOHOL	100-51-6	1 - <10%

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Inhalation Remove to fresh air. Oxygen or artificial respiration if needed.

Ingestion If swallowed, do not induce vomiting. Get medical attention immediately.

Self-protection of the first aider Use personal protective equipment. Avoid contact with eyes, skin and clothing.

Most important symptoms and effects, both acute and delayed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide. Foam. Dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

Hazardous combustion products Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides. Hydrocarbons. Ammonia.

Protective equipment and precautions for firefighters
Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Close container after each use. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. If splashes are likely to occur, wear goggles. Wear protective gloves/clothing. Do not burn, or use a cutting torch on, the empty drum. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products Acids. Alkaline. Amines. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
PROPRIETARY SOLVENT	TWA: 50 ppm STEL: 100 ppm	TWA: 100 ppm TWA: 360 mg/m^3 STEL: 150 ppm STEL: 540 mg/m^3	

Appropriate engineering controls

Engineering measures Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH"s Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses with side-shields If splashes are likely to occur, wear face-shield.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.
Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	opaque	**Odor**	Slight
Color	No information available	**Odor threshold**	No information available

Property	Values	Remarks
pH		No data available

Melting point / freezing point	No data available	No data available
Boiling point / boiling range	100 °C / 212.0 °F	
Flash point	No information available	
Evaporation rate		No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	1.1	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.03383	g/cm3
Water solubility	Insoluble in cold water	
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition temperature	No data available	No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	1000 centipoises	approx

Other Information

Density	8.62217 lbs/gal
Volatile organic compounds (VOC) content	1.50378 lbs/gal
Total volatiles weight percent	79.23 %
Total volatiles volume percent	82.26 %
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Acids, Alkaline, Amines, Strong oxidizing agents

Hazardous decomposition products
Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Ammonia. Carbon oxides. Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation	May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
Eye contact	Contact with eyes may cause irritation.
Skin contact	May cause irritation. May cause sensitization by skin contact.
Ingestion	Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
PROPRIETARY SOLVENT	= 5000 mg/kg (Rat)	= 13 g/kg (Rabbit)	> 7559 ppm (Rat) 6 h
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4	= 6500 mg/kg (Rat)	= 14500 mg/kg (Rabbit)	= 72500 mg/m³ (Rat) 4 h
BENZYL ALCOHOL 100-51-6	= 1230 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data. Skin sensitizer. Substances known to be mutagenic to man. Substances known to impair fertility.

Sensitization May cause sensitization of susceptible persons.

Mutagenicity May cause genetic defects.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Reproductive effects Suspected of damaging fertility or the unborn child.

STOT - single exposure No information available

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure

Target organ effects blood, Central nervous system, Central Vascular System (CVS), Eyes, hematopoietic system, kidney, liver, Lungs, respiratory system, Skin.

Aspiration hazard No information available.

Acute Toxicity 30.11817 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

69.83527 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
PROPRIETARY SOLVENT		20.8: 96 h Pimephales promelas g/L LC50 static 4600 - 10000: 96 h Leuciscus idus mg/L LC50 static	23300: 48 h Daphnia magna mg/L EC50
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4		50 - 70: 96 h Brachydanio rerio mg/L LC50 static 77: 96 h Pimephales promelas mg/L LC50 static	665: 48 h Daphnia magna mg/L LC50
BENZYL ALCOHOL 100-51-6	35: 3 h Anabaena variabilis mg/L EC50	460: 96 h Pimephales promelas mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 static	23: 48 h water flea mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility in Environmental Media

Chemical name	log Pow
PROPRIETARY SOLVENT	-0.437
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4	1.77

BENZYL ALCOHOL 100-51-6	1.1

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name paint,water base freezable NOT REGULATED

Additional information Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does Not Comply
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Does Not Comply
AICS	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Chemical name	**HAPS Data**
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Chemical name	**SARA 313 - Threshold Values**
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE - 124-17-4	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

California Prop. 65

None of the ingredients are listed with California Proposition 65.

Chemical name	California Prop. 65
AMORPHOUS SILICA - 7631-86-9	Carcinogen

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
PROPRIETARY SOLVENT	X	X	X
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4	X		X
BENZYL ALCOHOL 100-51-6		X	X

16. OTHER INFORMATION

NFPA	**Health** 2	**Flammability** 0	**Instability** 0	**Physical hazard** *
HMIS (Hazardous Material Information System)	**Health** 2*	**Flammability** 0	**Reactivity** 0	

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 24-Oct-2018
Revision Summary
4 5 7 10 8 9 11 14 15 1

Disclaimer

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.
To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

End of SDS

Safety Data Sheet

Issue Date 05-Mar-2018 **Revision Date** 05-Mar-2018 **Revision Number** 5

1. IDENTIFICATION

Product identifier

Product Code F151-1051B
Product Name ELASTO-GRIP FC GREEN CONVERTER

Other means of identification

Common Name SERIES 151-1051, PART B
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 816-474-3400

Distributor
Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203, Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 1

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Causes serious eye damage



Appearance green **Physical state** liquid **Odor** Slight

Precautionary Statements
Prevention

Wear protective gloves/protective clothing/eye protection/face protection

Response
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician

Storage
Keep away from children

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other information
Causes mild skin irritation
Harmful to aquatic life with long lasting effects
Acute Toxicity 14.11162 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
EPOXY POLYMER	155240-10-1	10 - <30%
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	124-17-4	1 - <10%

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation Remove to fresh air. Oxygen or artificial respiration if needed.

Ingestion If swallowed, do not induce vomiting. Get medical attention immediately.

Self-protection of the first aider Use personal protective equipment. Avoid contact with eyes, skin and clothing.

Most important symptoms and effects, both acute and delayed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide. Foam. Dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

Hazardous combustion products Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Aldehydes. Carbon oxides. Hydrocarbons. Oxides of nitrogen.

Protective equipment and precautions for firefighters

Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Close container after each use. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. If splashes are likely to occur, wear goggles. Wear protective gloves/clothing. Do not burn, or use a cutting torch on, the empty drum. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation. Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products Strong oxidizing agents. Acids. Alkalis. Cleaning solutions such as Chromerge and Aqua Regia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines .

Appropriate engineering controls

Engineering measures Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH"s Threshold Limit Values (TLV).

Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Use chemical resistant splash type goggles. If splashes are likely to occur, wear face-shield.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	green	**Odor**	Slight
Color	No information available	**Odor threshold**	No information available

Property	**Values**	**Remarks**
pH		No data available
Melting point / freezing point	No data available	No data available
Boiling point / boiling range	100 °C / 212.0 °F	
Flash point	No information available	
Evaporation rate		No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	.8	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.00928	g/cm3
Water solubility	Insoluble in cold water	
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition temperature	No data available	No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

Other Information

Density	8.41737 lbs/gal
Volatile organic compounds (VOC) content	1.18846 lbs/gal
Total volatiles weight percent	85.14 %
Total volatiles volume percent	86.04 %
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks. Epoxy constituents.

Incompatible materials
Strong oxidizing agents, Acids, Alkalis, Cleaning solutions such as Chromerge and Aqua Regia

Hazardous decomposition products
Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Oxides of nitrogen. Aldehydes. Carbon oxides. Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye contact Causes serious eye damage.

Skin contact Irritating to skin.

Ingestion Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4	= 6500 mg/kg (Rat)	= 14500 mg/kg (Rabbit)	= 72500 mg/m³ (Rat) 4 h

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders. Irritating to eyes and skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
Sensitization No information available.
Mutagenicity No information available.
Carcinogenicity There are no known carcinogenic chemicals in this product.
Reproductive effects No information available.
STOT - single exposure No information available
STOT - repeated exposure No information available
Aspiration hazard No information available.

Acute Toxicity 14.11162 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

14.29022 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4		50 - 70: 96 h Brachydanio rerio mg/L LC50 static 77: 96 h Pimephales promelas mg/L LC50 static	665: 48 h Daphnia magna mg/L LC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility in Environmental Media

Chemical name	log Pow
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4	1.77

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name paint,water base freezable Not regulated

Additional information Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Does Not Comply
EINECS/ELINCS	Does Not Comply
ENCS	Does Not Comply
IECSC	Does Not Comply
KECL	Does Not Comply
PICCS	Does Not Comply
AICS	Does Not Comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Chemical name	HAPS Data
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE - 124-17-4	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

California Prop. 65

None of the ingredients are listed with California Proposition 65.

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
DIETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 124-17-4	X		X

16. OTHER INFORMATION

NFPA	**Health** 3	**Flammability** 0	**Instability** 1	**Physical hazard** -
HMIS (Hazardous Material Information System)	**Health** 3	**Flammability** 0	**Reactivity** 1	

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 05-Mar-2018
Revision Summary
9 4 5 7 10 8 11 14 15 1

Disclaimer

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.
To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

End of SDS